

# 1987

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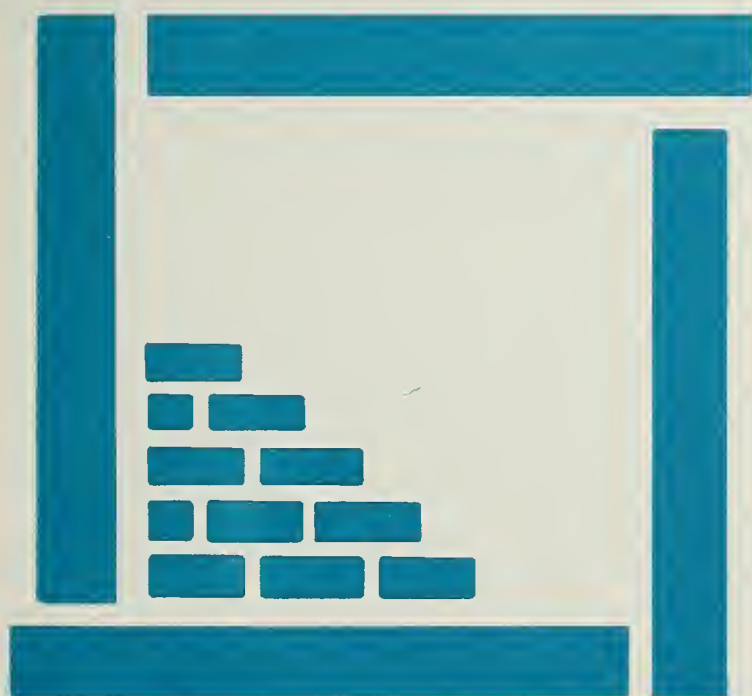
# Census of Construction Industries

CC87-I-14

## INDUSTRY SERIES

# Plastering, Drywall, Acoustical, and Insulation Work Special Trade Contractors

## Industry 1742



U.S. Department of Commerce  
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# ACKNOWLEDGMENTS

Many persons participated in the various activities of the 1987 Census of Construction Industries.

The overall planning and review of the census operations were performed by the staff of the Office of the Assistant Director for Economic and Agriculture Censuses.

This report was prepared in the Construction Statistics Division. **Barry A. Rappaport**, Assistant Division Chief for Industry Surveys, was responsible for the overall planning, management, and coordination of the census of construction industries. Planning and implementation were under the direction of **A. William Visnansky**, Chief, Census Operations Branch, with primary staff assistance by **Juliana Van Berkum**, **Barbara J. Hadden**, **Edward R. Glover**, **Susan L. Hostetter**, **Shirley M. Baker**, and **Carolyn J. Stone**. Under the direction of **Jesse Pollock**, **Edward K. Ricketts** and **Dennis K. Duke** developed the sampling plans and variance and estimation specifications.

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Special acknowledgment is also due the many businesses whose cooperation has contributed to the publication of these data.

If you have any questions concerning the statistics in this report, call (301) 763-7546.

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# **Census of Construction Industries**

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Issued January 1990



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## PURPOSE AND USES OF THE ECONOMIC CENSUSES

The economic censuses are the major source of facts about the structure and functioning of the Nation's economy. They provide essential information for government, business, industry, and the general public.

*Economic censuses furnish an important part of the framework for such composite measures as the gross national product, input-output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions.*

*Policy-making agencies of the Federal Government use the data, especially in monitoring economic activity and providing assistance to business.*

*State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.*

*Trade associations study trends in their own and competing industries, and keep their members informed of market changes.*

*Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.*

## AUTHORITY AND SCOPE

Title 13 of the United States Code (sections 131, 191, and 224) directs the Census Bureau to take the economic censuses every 5 years, covering years ending in 2 and 7. The 1987 Economic Censuses consist of the—

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Transportation
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction Industries

Special programs also cover enterprise statistics and minority-owned and women-owned businesses. (The 1987 Census of Agriculture and 1987 Census of Governments are conducted separately.) The next economic censuses are scheduled to be taken in 1993 covering the year 1992.

## AVAILABILITY OF THE DATA

The results of each of the economic censuses are available in printed reports, for sale by the U.S. Government Printing Office, and on microfiche, computer tape, compact discs with read-only memory, and flexible diskettes, for sale by the Census Bureau. Order forms for all types of products are available on request from Customer Services, Census Bureau, Washington, DC 20233. A more complete description of publications being issued from this census is on the inside back cover of this document.

Census facts are also widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. Finally, State Data Centers in every State and Business and Industry Data Centers in many States also supply economic census statistics.

## WHAT'S NEW IN 1987

Several changes have taken place for the 1987 censuses. Data will be reported on the basis of the newly revised Standard Industrial Classification (SIC) system with selected reports including "bridge tables," linking the old and new classification systems. A new set of metropolitan



areas has been adopted, and more detailed information will be available for businesses with no paid employees. For additional information on these changes, review the subsequent text.

One important change involves receipts of contractors and builders. Prior to 1987, the Census of Construction Industries collected receipts as the primary measure of construction activity. For 1987, the census collected the "value of construction work done" to better measure actual construction activity done during the year. Differences between the two concepts occur when work is done in one year and payment received either from the prior or in the succeeding year. In addition, receipts do not include work a contractor performs for its own account and use.

## **HISTORICAL INFORMATION**

The economic censuses have been taken together as an integrated program at 5-year intervals since 1967, and before that for 1963, 1958, and 1954. Prior to that time, the individual censuses were taken separately at varying intervals.

The economic censuses trace their beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for 1840 and subsequent censuses to include mining and some commercial activities. In 1902, Congress established a permanent Census Bureau and directed that a census of manufactures be taken every 5 years. The 1905 manufactures census was the first time a census was taken apart from the regular every-10-year population census.

The first census of business was taken in 1930, covering 1929. Initially it covered retail and wholesale trade, and construction industries, but it was broadened in 1933 to include some of the service trades.

The 1954 economic censuses were the first to be fully integrated—providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. These were the first censuses to be taken by mail, using lists of firms provided by the administrative records of other federal agencies. Since 1963, administrative records have also been used to provide basic statistics as well for very small firms, reducing or eliminating the need to send them census questionnaires. The Enterprise Statistics Program, which publishes combined data from the economic censuses, was made possible with the implementation of the integrated census program in 1954.

The range of industries covered in the economic censuses has continued to expand. The Census of Construction Industries began on a regular basis in 1967, and the scope of service industries was broadened in 1967, 1977, and 1987. The Census of Transportation began in 1963 as a set of surveys covering travel, transportation of commodities, and trucks. New for 1987 are publications reporting on business establishments engaged in several transportation industries, paralleling the data on establishments in

other sectors. This is part of a gradual expansion in coverage of industries previously subjected to government regulation. The Survey of Minority-Owned Business Enterprises was first conducted as a special project in 1969 and was incorporated into the economic censuses in 1972 along with the Survey of Women-Owned Businesses.

Economic censuses have also been taken in Puerto Rico since 1909, in the Virgin Islands and Guam since 1958, and in the Northern Mariana Islands since 1982.

Statistical reports from the 1982 and earlier censuses provide historical figures for the study of long-term time series, and are available in some large libraries. All of the census data published since 1967 are still available for sale on microfiche from the Census Bureau.

## **AVAILABILITY OF MORE FREQUENT ECONOMIC DATA**

While the censuses provide complete enumerations every 5 years, there are many needs for more frequent data as well. The Census Bureau conducts a number of monthly, quarterly, and annual surveys, the results of which appear in publication series such as *Current Construction Reports* (building permits, housing starts, and value of new construction put in place), *Current Business Reports* (retail and wholesale trade and service industries), the *Annual Survey of Manufactures*, *Current Industrial Reports*, and the *Quarterly Financial Report*. Most of these surveys, while providing more frequent observations, yield less kind-of-business and geographic detail than the censuses. The *County Business Patterns* program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county.

## **SOURCES FOR MORE INFORMATION**

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1987 Economic Censuses and Related Statistics*. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1987 Economic Censuses*. Contact Customer Services for information on availability.

## **CENSUS OF CONSTRUCTION INDUSTRIES—SCOPE AND CLASSIFICATION**

The 1987 Census of Construction Industries covers all employer establishments (establishments with payroll) primarily engaged in contract construction, construction on their own account for sale, or in subdividing real property



into lots as defined in the 1987 Standard Industrial Classification (SIC) Manual.<sup>1</sup> This industrial classification system has been developed by experts on classification in government and private industry under the guidance of the Office of Management and Budget and is in general use among government agencies and among organizations outside the government.

**Contract construction**—The SIC manual defines construction in three broad types of activity that follow:

1. **Building construction by general contractors or by operative builders**—General building contractors are primarily engaged in the construction of dwellings, office buildings, stores, farm buildings, and other building projects. Operative builders who build on their own account for sale are also included here. However, investment builders who build structures on their own account for rent are classified in Real Estate.
2. **Heavy construction general contractors**—Heavy construction general contractors are primarily engaged in the construction of highways, bridges, pipelines, sewers and water lines, marine construction, power, and petro-chemical plants and other nonbuilding construction projects. Special trade contractors are classified in heavy construction if they are specifically engaged in the following activities: grading for highway and airport runways; guardrail construction; installation of highway signs; asphalt and concrete construction of roads, highways, streets and public sidewalks; trenching, cable laying; conduit construction; underwater rock removal; pipeline wrapping; or land clearing and leveling.
3. **Construction by other special trade contractors**—These contractors include plumbers, painters, carpenters, electricians, brick layers, roofers, etc. For the most part, they perform their work at the site of construction, although they may also have shops where they perform work incidental to the job site.

General contractors in both the building and the heavy construction field usually assume responsibility for an entire construction project, but may subcontract to others all of the actual construction work or those portions of the project requiring special skills or equipment. Special trade contractors may work for general contractors, for other subcontractors, or may work directly for the owner of the property.

In addition to the industries classified in the SIC manual as Construction, this census also includes one industry

classified in the Real Estate area, SIC 6552, Land Subdividers and Developers, Except Cemeteries. These establishments are engaged in subdividing real property into lots and in developing it for sale on their own account.

Each establishment receiving a questionnaire was requested to report the percent of total dollar value of business done for each kind-of-business activity engaged in during 1987. This information was used for the computer assignment of appropriate industry classifications. During this work, various tests were also made using other data reported on the questionnaire. The proportion of construction work to total business was checked to verify that the establishment was primarily in construction. Also taken into consideration were the types of structures worked on during the year and the extent of work undertaken for other contractors.

Construction establishments often engage in various construction activities. It is necessary, however, to assign a single industry code to the establishment based on its major activity. Therefore, the statistics shown for an industry reflect not only the primary activity of the establishments in the industry, but also their secondary activities. The industry reports, however, do present data on the extent of secondary activities.

A revised edition of the SIC Manual was issued in 1987. Minor modifications were made to three industries in the construction sector: SIC 1611, Highway and Street Construction Contractors, Except Elevated Highways; SIC 1629, Heavy Construction Contractors, N.E.C.; and SIC 1771, Concrete Work Special Trade Contractors. The extent of these modifications are explained in the specific texts for those industries. "Bridge tables" are also included showing selected data tabulated using both the previous classification system and the 1987 revision.

## ESTABLISHMENT BASIS OF REPORTING

The census of construction industries is conducted on an establishment basis. A "construction establishment" is defined as a relatively permanent office or other place of business where the usual business activities related to construction are conducted. With some exceptions, a relatively permanent office is one which has been established for the management of more than one project or job and which is expected to be maintained on a continuing basis. Such "establishment" activities include, but are not limited to estimating, bidding, purchasing, supervising, and operation of the actual construction work being conducted at one or more construction sites. Separate construction reports were not required for each project or construction site.

Companies with more than one construction establishment were required to submit a separate report for each such establishment operated during all or any part of 1987. The census of construction industries figures represent a summary of records for individual establishments rather than for companies. The census tabulations, therefore, differ from those prepared on a company basis.

<sup>1</sup>Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.



If an establishment engaged in construction and one or more distinctly different lines of economic activity (wholesale or retail trade, service, manufacturing, mining, etc.) at the same place of business, it was requested to file a separate report appropriate to each activity, provided that the activity was of substantial size and separate records were maintained or substantially accurate estimates could be prepared.

If a separate establishment report could not be prepared for each activity, then a construction report was requested covering all activities of that establishment providing that the 1987 value of construction work exceeded the gross receipts from each of its other activities.

Construction businesses with no payroll during 1987 (nonemployers) were not required to file census reports. Tabulation of data for these businesses are based on administrative records and are shown only in U.S. summary publications and the geographic area reports series. Refer to the section on "Sample Design" for details. Foreign construction activities were not included in this census.

## **SAMPLE DESIGN, ESTIMATION PROCEDURES, AND RELIABILITY OF ESTIMATES**

The companies included in the 1987 Census of Construction Industries were identified as part of an operation common to all 1987 Economic Censuses. Construction companies were divided into employers (companies with payroll) and nonemployers (companies without payroll). Statistical information for the employers was obtained in the census by a survey which included all medium size and large employers and a sample of the smaller ones. Census reports were not required from the nonemployers. Statistics on them were obtained from administrative records of other agencies of the Federal Government.

### **Employer Companies**

**Developing the sampling frame for employer companies**—This operation started with obtaining a list of all construction companies in the active records of the Internal Revenue Service (IRS) which were subject to payment of Federal Insurance Contributions Act taxes. The basic source for this list has been the Internal Revenue Service Business Master File, a comprehensive list of companies engaged in business activities in the United States. The file contains the name, address, and form of ownership of each company and also indicates whether or not the company is subject to the FICA. Each company in this file is assigned a unique employer identification (EI) number which it uses in filing its various reports with the IRS. The Social Security Administration (SSA) maintains a similar list using the same identification numbers, which also contains information on the industrial classification of each company. The Bureau of the Census obtained both of these lists and combined them.

Under special arrangements which safeguarded the confidentiality of the information, the Bureau also obtained administrative records data on payrolls and receipts and added these data to the combined list. The list, thus created from the IRS-SSA information, was a list of employer companies. However, for the 1987 Economic Censuses the basic reporting unit is the "establishment." Therefore, steps were taken to identify the individual establishments of those companies which operate more than one place of business. The information for making this determination was obtained by means of the Company Organization Survey (COS), an annual canvass of all known multiestablishment companies and large single-establishment companies. Thus, the 1987 Economic Census list for single-establishment employer companies was obtained from the IRS-SSA, but the list of establishments of multiestablishment employer companies was obtained directly from those companies in the COS. Refer to the section on "Establishment Basis for Reporting" for details.

In general, the IRS-SSA list provided sufficient industrial classification data to assign a company to the proper economic census, but there were a number of companies for which this information was inadequate or unavailable. A special form, NC-9923, General Schedule, was mailed to all such companies, requesting information on the nature of the company's activities. From the information reported, the company was given an industrial classification code and assigned to the appropriate economic census. Since construction companies found in this way were identified only after the regular census mailing had taken place, they were treated as a supplement to the basic list.

**Selecting the employer sample**—The sample was designed to provide reliable State and metropolitan area estimates for each construction industry. It consisted of all construction establishments in multiestablishment companies, all single-establishment companies with estimated total employment of 20 employees or more, and a probability sample of single-establishment companies with estimated employment of fewer than 20 employees.

Supplementing the sample were construction companies identified from the NC-9923, General Schedule. Also affecting the sample were the misclassified companies; i.e., companies included in the samples of other trade areas which reported they were construction companies and companies originally classified in construction which reported they were not construction companies.

Of the 533,000 single-establishment employer companies initially classified as construction companies, 147,000 were included in the sample. All of the 13,000 establishments of multiestablishment companies were included in the sample. There was a net increase in the sample of 60,000 establishments resulting from establishments originally unclassified (receiving the NC-9923) or misclassified.

The probability sample of the smaller single-establishment companies was a stratified random sample. Strata were formed from all establishments with the same initial four-digit SIC code, in the same State, in the same metropolitan



area or in the balance of the State, and in the same size class based on estimated total employment. If the four-digit SIC code for an establishment was incomplete, the establishment was placed in a stratum for miscellaneous companies. Because they were small, all companies were included in the sample for the following three industries: SIC 1622, Bridge, Tunnel, and Elevated Highway Construction Contractors; SIC 1795, Wrecking and Demolition Work Special Trade Contractors; and SIC 1796, Installation or Erection of Building Equipment Special Trade Contractors.

#### Estimation procedures for 1987 and 1982 data—

Since all larger employer companies and some smaller ones were included in the census, sample estimation was required only for the universe of companies not selected with certainty. The published statistics are the totals of the estimates for the sampled companies and the aggregates for the certainty companies. All estimates for 1987 and 1982 published here are simple unbiased estimates of the form:

$$x'_c = \frac{\sum_{i=1}^{n_c} x_i}{n_c}$$

where:  $x'_c$  is the simple unbiased estimate of a characteristic for a publication cell.

$x_i$  is the reported value of a characteristic for an individual establishment in the publication cell.

$p_i$  is the selection probability of that firm.

$n_c$  is the number of firms in the sample for the cell.

Data for certain characteristics were reported as a percentage of the dollar value of business done. Before this formula was applied to those characteristics, it was necessary to convert the reported percentages into dollars.

**Reliability of employer statistics**—Since the estimates for employer establishments in these reports are based on the samples, they are subject to sampling variability and may be expected to differ from results which would have been obtained if a complete census had been taken using the same forms and procedures. The sampling errors shown in the tables were estimated directly from the sample reports, using methods appropriate for the sample design and form of estimation used.

The relative standard error is a measure of sampling variability, i.e., the variation that might occur by chance because only a sample of the population is surveyed. As calculated for this report, the relative standard error also partially reflects the effect of random errors of response and processing, but it does not take into account the effect of any consistent biases due to those types of errors. The chances are about 68 out of 100 that an estimate from the

sample would differ from a complete census by less than the relative standard error. The chances are about 95 out of 100 that the difference is less than twice the relative standard error and about 99 out of 100 that it is less than 2-1/2 times the relative standard error. Individual estimates with large relative standard errors have been shown in the published tables. Any such estimates should be used with caution. The very large relative standard errors generally occur for the smaller estimates.

Relative standard errors have been calculated for all of the published statistics, although they are shown for each statistic only in the tables presenting detailed statistics. Other tables show relative standard errors only for certain characteristics because of lack of space.

As calculated for this report, the relative standard error measures certain nonsampling errors, but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples with the same size and design, between the estimates and the true value being estimated. Nonsampling errors can be attributed to many sources: inability to obtain information about all cases in the sample; definitional difficulties; differences in interpretation of questions; inability or unwillingness of respondents to provide correct information; and errors made in processing the data. Although no direct measurements of the biases have been obtained, it is believed that most of the important response and operational errors were detected in the course of reviewing the data for reasonableness and consistency.

A potential source of bias is in the imputation for those establishments that have not responded by the time of final publication. Data were estimated for establishments that did not report by that date, although selected establishments were contacted again to obtain as much information on the telephone as possible. Some publication cells in which more than 40 percent of the data were not reported have been suppressed.

### Nonemployer Companies

As described earlier, the information derived from the business income tax returns of all companies was matched to the census employer file on the basis of common identification numbers. Those business income tax returns which could not be matched, were further classified on the basis of several characteristics. Returns with characteristics consistent with companies without payroll were treated as nonemployers. The nonemployer construction companies were not required to file census reports.

For "number of establishments," each separate income tax return was assumed to be an establishment. "All business receipts" was based on receipts information reported on the tax return.

Since no sampling was involved in the nonemployer establishments, the statistics for nonemployers are not subject to sampling variability. However, these data are subject to an unknown amount of reporting and processing errors which could not be detected by the Census Bureau.



## **CENSUS REPORT FORMS**

Information for the 1987 Census of Construction Industries was obtained from employer establishments primarily through the use of twenty-four questionnaires, determined by industry classification and size. Standard forms and short forms were developed for each of the following SIC groups: 15, 16, 171, 172, 173, 174, 175, 176, 177, 178, and 179 and for the establishments classified in SIC 6552. Establishments with 50 or more employees all received the standard form. A sub-sample of establishments with fewer than 50 employees received short forms instead of the standard forms. The short forms covered only major items and omitted some of the detail found in the longer forms.

In reviewing and developing the questionnaires, comments and recommendations were elicited from construction trade associations and appropriate advisory groups. The Bureau surveyed several thousand firms representing all economic activities to gain insight into the way companies maintain records and to see whether new information could be collected.

## **DATA PROCESSING**

The 1987 census report forms were mailed out in December 1987. They were mailed from and returned to the Census Bureau's Data Preparation Division in Jeffersonville, Ind., where routine editing and coding of the report forms were also accomplished. Collection of these report forms was essentially completed in July 1988.

The returned reports underwent extensive processing. A preliminary edit done at the time of data entry identified obviously deficient reports and reports needing clarification. When necessary, these problems were resolved by further contact with the respondents. Next, the data were transmitted to Census Bureau headquarters near Washington, DC.

Data records, then, underwent a detailed computer review and analysis. The records containing significant problems were referred for further analytical review and, if necessary, contacts were made with the respondents. The computer performed most classification coding (such as industry coding, geographic coding, and size coding), and imputation for missing items or for reports not received in time for tabulation. The imputation was performed on an industry (or industry group)-State (or geographic group) basis using all available response and administrative data.

The data records were then tabulated on an industry basis. Industry totals were subjected to analytical review, and selected statistics were prepared for the preliminary reports. Corrections resulting from this review were made to the computer records and final tabulations were produced.

The review of a preliminary report for an industry often uncovered the need for corrections or revisions to the data for another industry for which a preliminary report had already been published. The final reports incorporate all

revisions and corrections made during the review of the preliminary reports and contain considerable more data than were published in those reports.

## **GEOGRAPHIC CLASSIFICATION**

Information for the 1987 Census of Construction Industries' final industry report series is classified on the basis of two types of geographic distributions: (1) physical location of the establishment, and (2) location of construction work. A separate code was assigned on each basis allowing us to present data by both physical locations of the establishment and location of construction work.

The geographic area reports series presents similar data by industry for each State (physical location of the establishment) and for selected MSA's, CMSA's and PMSA's.

## **DUPLICATION IN VALUE OF CONSTRUCTION WORK**

The aggregate of value of construction work reported by all construction establishments in each of the several industry, geographic area, or other groupings in this census, contains varying amounts of duplication, since the construction work of one firm may be subcontracted to other construction firms and also be included in the subcontractors' value of construction work. To avoid this duplication, a "net" value of construction work figure has been derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work.

Duplication in value of business between other construction and nonconstruction industries, results from the use of products of these other industries as input materials by construction establishments. "Value added," avoids this duplication and is, for most purposes, the best measure for comparing the relative economic importance of industries or areas. "Value added," is defined in the 1987 Census of Construction Industries as equal to dollar value of business done less costs for construction work subcontracted to others and payments for materials, components, supplies, and fuels. However, for SIC 6552 and SIC 1531 where land receipts are significant, land receipts are also subtracted from dollar value of business done.

## **SPECIAL TABULATIONS**

Special tabulations of data collected in the 1987 Census of Construction Industries may be obtained on computer tape or in tabular form. The data will be in summary form and subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) as are the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact and detailed specifications of the type and format of the data to be provided, should be directed to the Chief, Construction Statistics Division, Bureau of the Census, Washington, DC, 20233.



To discuss a special tabulation before submitting specifications, call 301-763-7546.

## COMPARABILITY OF CENSUS OF CONSTRUCTION INDUSTRIES DATA WITH OTHER DATA

Data contained in the reports of the 1987 Census of Construction Industries are not the same as the data published in the Census Bureau's monthly Construction Reports, Series C30, Value of New Construction Put in Place. The main difference is that the C30 series covers all new construction put in place without regard to who is performing the construction activity, whereas the construction census figures cover both new construction and maintenance and repair work done by establishments classified in the construction industry. Significant amounts of construction are done by establishments classified outside of construction (in real estate, manufacturing, utilities and communications, for example), both as "force account" construction and construction done for others. In addition, the value in place series includes construction-related expenses such as architectural and engineering costs and the costs of materials supplied by owners which are normally not reflected in the Census of Construction.

Data contained in the reports of the census of construction industries may also differ from industry data in "Employment and Earnings Statistics," published by the Bureau of Labor Statistics, and "Statistics of Income," published by the Internal Revenue Service. These differences arise from varying definitions of scope, coverage, timing, classification, and methodology.

## ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in this publication:

*	Sampling error exceeds 40 percent.
**	Represents the sum of all employees during pay periods including 12th of March, May, August, and November, divided by 4.
-	Represents zero.
†	Represents value of construction work less costs for construction work subcontracted to others. (See Duplication in Value of Construction Work.)
††	Represents dollar value of business done less costs for construction work subcontracted to others, and costs for materials, components, supplies, and fuels. In SIC's 1531 and 6552, land receipts are also subtracted from dollar value of business done. (See Duplication in Value of Construction Work.)
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate, associated relative standard error, or a consistency review.
(W)	Greater than zero but less than 1 percent.
(X)	Not applicable.
n.s.k.	Not specified by kind.

# Users' Guide for Locating Statistics in This Report by Table Number

Statistics	For U.S.	By State	By employment size	By size class of dollar value of business done	By type, class, ownership, kind of business, and location of construction <sup>1</sup>	By specialization in types of construction
Assets and depreciation (gross book value):						
Beginning of year—buildings, machinery and equipment.....	3					
End of year—total.....	1, 3	1	5	6		
End of year—buildings, machinery and equipment.....	3					
Depreciation charges during year—buildings, machinery and equipment.....	3					
Capital expenditures:						
Total capital expenditures.....	1, 3	1	5	6		
New buildings—machinery and equipment.....	3					
Used buildings—machinery and equipment.....	3					
Communication services, costs for.....	2					
Employees:						
All employees—average number.....	1, 2	1	5	6		8
Construction workers—average number.....	1, 2, 9	1, 9				
Other employees—average number.....	2					
Employer costs for fringe benefits—legally required and voluntary expenditures.....	2					
Establishments—number in business during year.....	1, 2, 4, 9	1, 9	5	6		8
Hours—construction workers:						
Total.....	1, 2, 9	1, 9	5	6		
Quarterly.....	2, 9	9				
Inventories.....	4					
Materials, components, supplies, and fuels—costs for.....	1, 2	1	5	6		
Payroll:						
First quarter, all employees.....	2					
Annual:						
All employees.....	1, 2	1	5	6		8
Construction workers.....	1, 2	1				
Other employees.....	2					
Power, fuels, and lubricants—costs for.....	2					
Proprietors and working partners.....	2					
Ratios, State.....	13	13				
Value and receipts:						
Dollar value of business done, total.....	2		5	6	11	
Value of construction work, total.....	1, 2, 4	1	5	6	2, 7, 10	8
For work subcontracted in from others.....	2					
Other business receipts and land receipts <sup>2</sup> .....	2					
Net value of construction work.....	1, 2	1	5	6		8
Value added.....	1, 2	1	5	6		8
Rental costs:						
Total.....	1, 2	1	5	6		
For machinery and equipment.....	2					
For buildings.....	2					
Repairs to buildings and other structures.....	2					
Repairs to machinery and equipment.....	2					
Selected industry ratios.....	12					
Subcontract work to others, costs for.....	1, 2	1	5	6		8

Note: Data for 1982 and earlier years are also available in some of these tables.

<sup>1</sup>Type—buildings, roads, etc. Class—new construction; additions, alterations, or reconstruction; or maintenance and repair work. Ownership—private or government owned.

<sup>2</sup>Land receipts are shown separately for SIC's 1531 and 6552 only.



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## Plastering, Drywall, Acoustical and Insulation Work Special Trade Contractors

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Statistics for Establishments Without Payroll appear in the U.S. Industry Summary Report.

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# SUMMARY OF FINDINGS

Establishments classified in this industry are primarily engaged in applying plaster, plain or ornamental; the installation of lathing or other appurtenances to receive plaster; or drywall, acoustical, and building insulation work. For additional examples refer to the 1987 Standard Industrial Classification (SIC) Manual published by the Office of Management and Budget, Executive Office of the President.

During 1987, the establishments with paid employees classified in this industry accounted for \$16.8 billion in total dollar value of business. Of this amount, \$16.4 billion were for the value of construction work. These establishments paid out \$5.5 billion for materials, components, and supplies and \$1.3 billion for construction work subcontracted to others. Costs for selected power, fuels, and lubricants for this industry were \$193 million. Value added for 1987 was \$9.7 billion.

There were 17,809 establishments with total employment averaging 253,563 during the year. Total payroll for 1987 was \$5.5 billion. Total hours worked by construction workers during the year were 351 million hours.

Larger establishments with 20 employees or more, while representing only 18 percent of the total number of employer establishments in this industry accounted for 69 percent of all business done.

A "construction establishment" is defined as a relatively permanent office, or other place of business, where the usual business activities related to construction are conducted. A separate census report was required from each sampled establishment covering domestic operations. Separate reports were not, however, required for each project or construction site.

In 1987, the value of construction work was collected to better measure actual construction activity done during the year. Construction receipts, as reported in earlier censuses, may have included the value of work done before or after the calendar year and may have excluded the value of work in progress during the calendar year. Receipts may have also excluded work done by builders engaged in construction for sale on their own account or for their own use. All dollar values are shown in current dollars for the years specified and have not been adjusted for inflation.

The data in this report are estimated from a sample survey and are subject to sampling variability as well as errors of response and nonreporting. The relative standard error shown in the tables is a measure of sampling variability. Descriptions of the sampling, estimating procedures, and data reliability are included in the Introduction.



Figure 1. **Value of Construction Work by Type of Construction**  
(Percent)

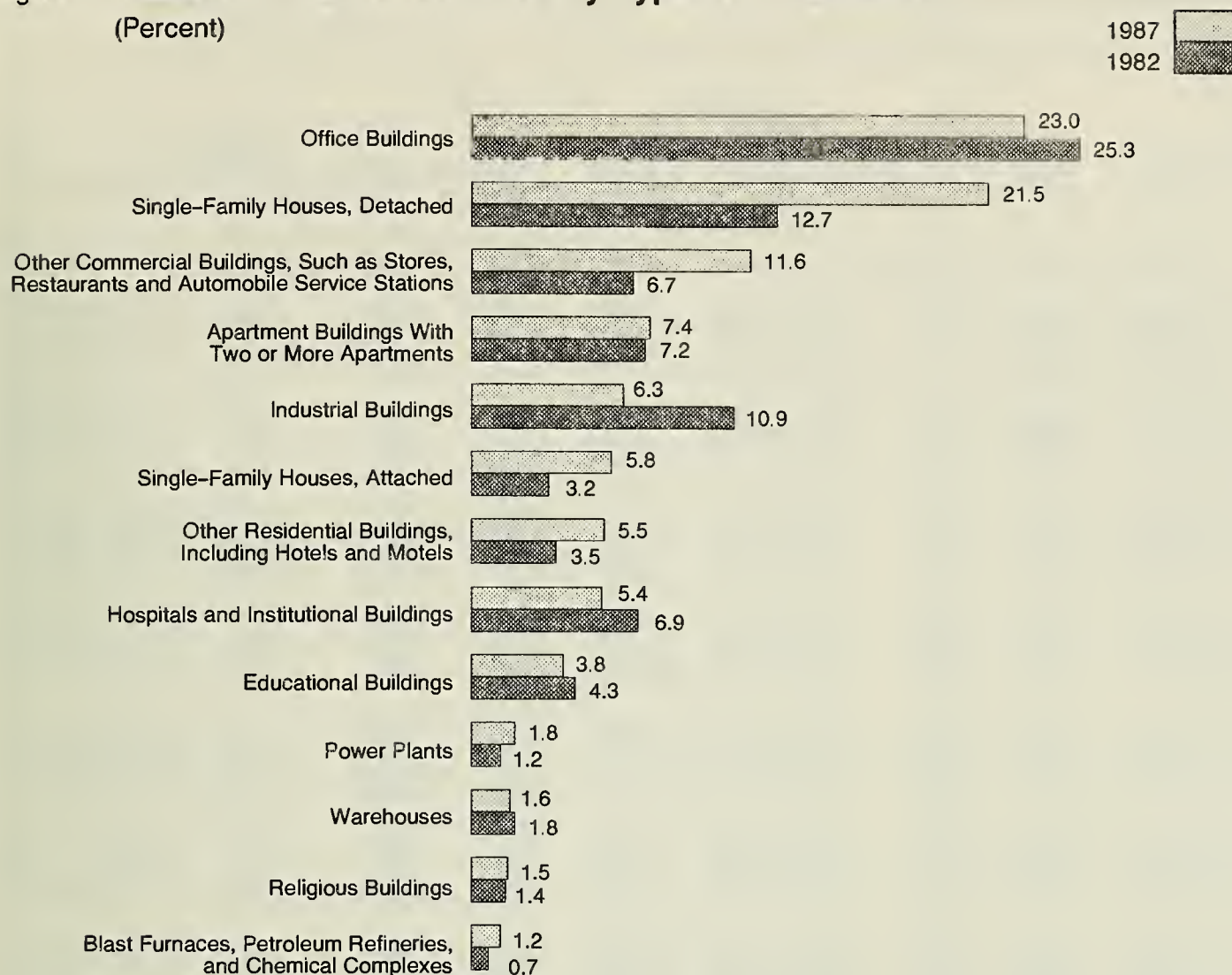
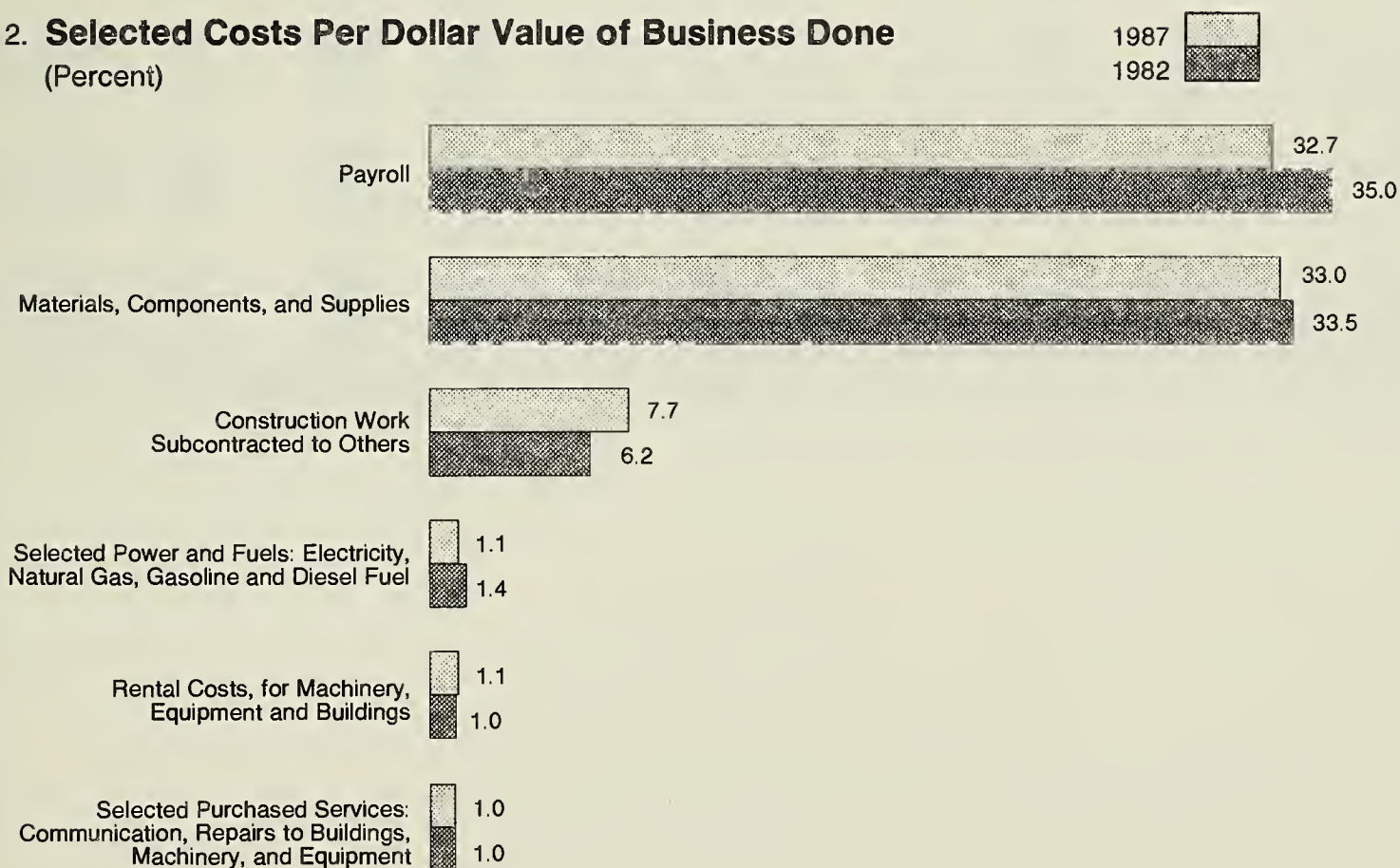


Figure 2. **Selected Costs Per Dollar Value of Business Done**  
(Percent)





**Table 1. General Statistics for Establishments With Payroll by State: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	1987							
	Number of establishments	Employees**		Payroll		Construction worker hours (thousands)	Value of construction work	Net value of construction work†
		All	Construction workers	All employees	Construction workers			
A	B	C	D	E	F	G	H	
United States -----	17 809	253 563	217 392	5 484 795	4 347 926	350 749	16 426 850	15 137 323
Alabama -----	224	3 051	2 592	60 200	48 241	4 645	189 809	176 535
Alaska -----	49	315	257	11 012	9 163	406	27 207	26 199
Arizona -----	548	10 340	9 037	179 305	141 814	13 987	496 921	472 073
Arkansas -----	104	784	658	12 933	10 254	1 028	39 940	36 498
California -----	2 991	48 672	42 757	1 072 403	883 136	62 739	3 127 372	2 949 394
Colorado -----	343	3 718	3 178	68 249	53 949	5 472	191 263	174 961
Connecticut -----	240	3 663	3 076	106 518	75 871	5 172	331 590	286 680
Delaware -----	61	863	718	16 979	12 529	1 220	47 127	44 772
District of Columbia -----	13	696	610	8 634	7 982	1 024	20 855	(D)
Florida -----	1 530	19 940	16 831	354 222	275 674	27 667	1 194 405	1 041 370
Georgia -----	432	6 337	5 496	127 121	101 709	9 736	371 905	339 512
Hawaii -----	55	797	655	22 870	18 432	1 067	60 598	59 270
Idaho -----	100	675	540	9 177	6 751	1 072	40 875	34 453
Illinois -----	501	9 706	8 313	255 376	200 157	12 782	648 472	609 535
Indiana -----	275	3 272	2 754	76 752	63 497	5 239	211 377	192 422
Iowa -----	146	1 151	947	23 203	18 550	1 664	68 217	63 254
Kansas -----	187	1 759	1 526	36 331	29 479	2 269	109 759	99 459
Kentucky -----	172	3 232	2 839	56 922	46 735	4 805	168 467	155 350
Louisiana -----	176	2 690	2 305	56 257	47 274	3 972	136 240	127 071
Maine -----	128	1 522	1 329	27 255	21 484	2 278	106 069	102 890
Maryland -----	328	8 135	7 108	175 993	138 706	11 921	534 534	506 235
Massachusetts -----	574	6 470	5 425	172 665	123 928	9 924	482 165	440 098
Michigan -----	463	4 741	4 027	104 513	82 663	6 039	337 596	300 401
Minnesota -----	329	3 070	2 510	75 160	58 144	4 329	268 563	231 860
Mississippi -----	84	1 008	840	17 206	12 519	1 582	52 494	50 408
Missouri -----	375	4 652	3 998	110 693	90 212	6 335	300 349	280 969
Montana -----	42	131	109	1 389	1 138	107	5 348	5 115
Nebraska -----	128	1 235	1 040	21 120	16 574	1 974	72 562	(D)
Nevada -----	84	2 656	2 391	51 156	44 956	3 519	119 984	116 383
New Hampshire -----	176	2 179	1 851	47 806	34 144	2 399	167 717	138 527
New Jersey -----	468	7 278	6 085	202 342	156 386	9 909	624 373	565 006
New Mexico -----	147	1 801	1 580	27 465	21 960	2 572	83 570	79 524
New York -----	842	16 365	14 084	471 410	372 549	24 300	1 276 255	1 166 950
North Carolina -----	409	6 092	5 151	107 955	83 172	8 926	339 271	314 727
North Dakota -----	60	359	301	5 473	4 267	480	16 209	15 590
Ohio -----	546	7 272	6 125	160 309	128 865	10 850	453 007	419 156
Oklahoma -----	160	1 397	1 171	26 584	21 630	1 879	74 300	66 650
Oregon -----	280	2 032	1 752	34 425	27 580	2 524	102 970	98 265
Pennsylvania -----	633	11 157	9 598	278 433	229 038	16 275	970 380	935 711
Rhode Island -----	115	1 196	1 013	38 346	25 598	1 727	90 488	86 927
South Carolina -----	216	2 327	1 918	32 095	24 567	3 207	132 538	126 392
South Dakota -----	37	172	144	2 535	1 950	235	11 881	10 857
Tennessee -----	272	4 950	4 254	87 741	67 148	7 079	293 342	267 453
Texas -----	1 026	14 452	12 192	267 493	206 468	19 117	865 240	756 758
Utah -----	203	1 663	1 395	29 527	22 953	2 479	93 514	85 763
Vermont -----	55	459	380	7 659	6 119	719	24 408	22 641
Virginia -----	506	8 202	7 041	159 072	122 785	11 681	513 328	472 361
Washington -----	547	5 785	4 889	120 145	95 351	6 496	337 577	317 244
West Virginia -----	35	331	288	7 780	6 547	471	19 425	18 327
Wisconsin -----	349	2 559	2 087	55 099	44 442	3 266	166 923	154 417
Wyoming -----	*24	232	201	3 460	2 867	158	8 054	7 668

\*In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

1987—Con.						1982			Relative standard error of estimate (percent) for column—			Location of establishment
Value added††	Cost of materials, components, supplies, and fuels	Cost of construction work sub-contracted to others	Rental cost for machinery, equipment, and buildings	Capital expenditures, other than land	End-of-year gross book value of depreciable assets	All employees**	Total construction receipts¹	Value added††				
I	J	K	L	M	N	O	P	Q	B	H	M	
9 747 631	5 713 635	1 289 527	193 519	197 843	1 135 122	199 790	9 847 453	6 009 367	1	1	2	U.S.
109 099	70 699	13 274	1 778	3 727	13 445	2 194	91 589	46 597	4	4	6	AL
20 480	5 963	1 007	786	(D)	2 514	777	48 023	24 179	10	10	(D)	AK
299 752	182 564	24 847	7 124	11 030	52 690	4 667	189 019	109 685	3	3	4	AZ
21 866	16 185	3 442	557	510	3 546	1 105	49 936	26 408	12	11	36	AR
1 969 177	1 015 803	177 978	43 377	38 558	192 958	25 112	1 397 629	859 077	1	1	6	CA
113 376	64 489	16 302	2 723	2 800	19 537	5 305	204 858	113 343	5	4	20	CO
187 487	103 979	44 909	3 742	3 192	19 964	2 164	115 386	70 363	3	3	9	CT
28 470	(D)	2 354	733	1 468	4 528	592	28 688	16 371	8	7	23	DE
12 305	7 479	(D)	208	(D)	(D)	218	14 271	9 016	(W)	(D)	(D)	DC
609 418	446 478	153 035	15 534	16 521	75 694	15 247	619 247	344 908	3	3	11	FL
205 098	144 684	32 393	3 789	3 633	25 540	4 984	195 091	104 694	3	3	11	GA
42 422	16 994	1 328	896	794	2 919	842	63 272	41 282	4	4	25	HI
18 477	17 675	*6 421	*827	*1 128	*4 931	339	18 712	7 892	15	20	55	ID
426 387	204 022	38 936	6 984	5 372	38 018	8 298	453 961	293 461	2	2	12	IL
115 873	80 020	18 955	1 908	2 248	17 078	2 873	129 748	83 792	4	3	11	IN
38 163	27 151	4 962	550	700	6 925	1 198	53 161	35 150	8	9	26	IA
63 993	37 753	10 300	732	927	9 671	2 356	124 079	77 062	8	6	24	KS
95 692	61 500	13 117	1 560	1 783	9 439	1 826	80 274	49 576	8	7	18	KY
94 188	(D)	9 169	1 767	1 349	16 345	5 524	289 436	201 959	5	5	13	LA
76 901	(D)	3 179	738	2 735	15 243	468	25 921	16 394	13	27	30	ME
319 049	190 826	28 299	4 711	6 838	30 365	5 908	271 942	163 923	2	2	13	MD
287 807	157 718	42 067	5 878	6 245	27 204	3 749	195 379	110 523	5	3	15	MA
182 489	128 979	37 195	3 316	5 176	22 643	3 693	189 872	117 060	3	4	16	MI
149 313	86 528	36 703	2 651	4 074	22 215	3 504	193 435	116 104	4	4	17	MN
30 471	21 426	2 085	342	1 028	10 556	699	34 752	20 173	7	7	12	MS
184 789	105 940	19 380	2 787	2 114	18 631	4 382	238 539	144 082	3	3	14	MO
3 737	(D)	*233	*22	-	*1 054	157	9 521	4 955	33	25	-	MT
41 936	(D)	(D)	812	464	5 082	1 274	68 957	37 685	7	(D)	28	NE
78 448	39 769	3 600	1 525	1 101	8 174	1 314	58 347	35 402	9	4	30	NV
85 716	53 845	29 190	1 362	1 996	6 515	1 187	47 878	26 721	9	7	20	NH
368 401	203 915	59 366	5 626	7 603	39 900	5 040	264 077	189 126	2	3	10	NJ
51 118	29 987	4 045	1 101	1 055	7 916	1 720	66 714	43 408	8	6	35	NM
812 851	371 411	109 305	13 497	11 609	60 978	11 353	637 934	404 755	1	1	7	NY
177 962	148 256	24 543	5 684	4 524	30 152	5 289	195 398	103 250	3	3	12	NC
11 379	5 654	618	214	*972	3 964	511	25 583	14 851	16	18	55	ND
276 207	160 369	33 850	6 174	6 360	28 661	5 952	270 288	178 959	3	2	9	OH
42 728	(D)	7 650	1 082	329	8 191	3 188	202 510	129 262	8	6	18	OK
64 388	(D)	4 704	1 416	1 895	9 228	2 380	105 779	59 844	5	5	15	OR
611 532	342 828	34 669	8 497	6 897	40 211	8 085	429 162	290 852	3	2	10	PA
59 429	(D)	3 560	862	1 136	4 304	894	35 987	22 892	7	7	15	RI
72 098	55 343	6 145	1 715	2 349	9 928	1 985	85 987	48 221	7	7	39	SC
7 015	4 227	*1 023	132	*110	(D)	175	6 821	4 061	20	23	44	SD
157 789	117 058	25 888	3 003	3 243	15 975	3 710	169 537	101 820	3	4	13	TN
435 449	337 290	108 481	10 711	5 742	102 057	23 381	1 181 641	691 333	4	2	8	TX
52 744	35 308	7 751	1 432	1 580	10 633	1 582	77 469	42 336	8	8	34	UT
14 422	9 362	*1 766	240	591	1 772	188	10 082	5 456	14	14	28	VT
298 943	187 171	40 967	5 912	7 580	37 535	4 899	198 513	117 708	2	3	8	VA
206 674	123 345	20 333	4 891	4 299	25 186	4 197	228 258	147 464	4	3	10	WA
13 316	(D)	1 098	105	392	2 769	465	21 891	18 759	10	12	2	WV
95 428	62 017	12 505	1 357	1 741	10 002	2 449	116 178	77 113	5	6	20	WI
5 360	(D)	386	129	94	995	380	16 707	10 040	15	9	20	WY



**Table 2. Detailed Statistics for Establishments With Payroll: 1987 and Earlier Census Years**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	1987	1982	1977	1972	Relative standard error of estimate (percent)			
					1987	1982	1977	1972
Number of establishments in business during year .....	17 809	16 382	18 745	13 415	1	1	2	2
Proprietors and working partners .....	5 277	5 974	10 154	8 836	3	3	3	4
All employees** .....	253 563	199 790	180 326	170 364	1	1	1	1
Construction workers:								
March .....	209 597	163 967	143 119	140 810	1	1	1	1
May .....	216 084	168 185	157 307	148 718	1	1	1	2
August .....	226 327	176 838	170 209	158 603	1	1	1	2
November .....	217 612	169 880	162 526	153 293	1	1	1	2
Average .....	217 392	171 511	158 479	151 825	1	1	1	2
Other employees:								
March .....	35 988	28 229	20 650	17 951	1	1	1	2
May .....	35 344	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
August .....	36 753	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
November .....	36 574	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Average .....	36 171	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Construction worker hours (thousands):								
January to March .....	81 998	61 170	(NA)	(NA)	1	1	(NA)	(NA)
April to June .....	87 403	64 021	(NA)	(NA)	1	1	(NA)	(NA)
July to September .....	92 419	66 756	(NA)	(NA)	1	1	(NA)	(NA)
October to December .....	88 927	64 691	(NA)	(NA)	1	1	(NA)	(NA)
Total hours worked .....	350 749	256 639	(NA)	(NA)	1	1	(NA)	(NA)
Payroll, all employees .....	5 484 795	3 572 588	2 281 906	1 884 875	(W)	(W)	1	1
Payroll, construction workers .....	4 347 926	2 930 041	1 900 704	1 446 728	(W)	(W)	1	1
Payroll, other employees .....	1 136 868	642 548	381 202	239 147	1	(W)	1	1
First quarter payroll, all employees .....	1 240 482	833 830	484 553	(NA)	1	1	(W)	(NA)
Employer costs for fringe benefits, all employees .....	1 292 988	662 708	458 710	(NA)	1	(W)	(W)	(NA)
Legally required expenditures .....	889 800	510 018	252 084	(NA)	1	1	1	(NA)
Voluntary expenditures .....	403 388	152 889	208 846	(NA)	1	1	(W)	(NA)
Dollar value of business done .....	18 750 794	10 205 731	8 265 565	4 195 295	1	1	1	1
Value of construction work <sup>1</sup> .....	18 428 850	9 847 453	8 057 487	4 084 887	1	1	1	1
Value of construction work subcontracted in from others .....	11 653 481	6 711 830	4 436 845	2 617 582	1	1	1	1
Land receipts <sup>2</sup> .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Other business receipts .....	323 943	358 277	208 098	110 608	1	1	1	1
Net value of construction work† .....	15 137 323	9 215 255	5 819 425	3 839 335	1	(W)	1	1
Value added†† .....	9 747 631	6 009 367	3 630 142	2 584 805	1	(W)	1	1
Selected costs .....	7 003 162	4 196 364	2 635 423	1 610 490	1	1	1	2
Materials, components, and supplies <sup>3</sup> .....	5 521 016	3 417 323	2 311 008	1 365 138	1	1	1	1
Construction work subcontracted to others .....	1 289 527	632 198	238 042	245 352	2	1	1	3
Selected power, fuels, and lubricants .....	192 618	146 842	86 373	(NA)	1	1	1	(NA)
Electricity .....	23 317	17 159	8 691	(NA)	2	2	1	(NA)
Natural gas .....	6 686	5 266	3 852	(NA)	2	3	2	(NA)
Gasoline and diesel fuel .....	151 494	116 851	65 958	(NA)	1	1	1	(NA)
On highway use .....	139 341	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Off highway use .....	12 153	(NA)	(NA)	(NA)	5	(NA)	(NA)	(NA)
Other, including lubricating oils and greases .....	11 120	7 564	7 874	(NA)	3	3	2	(NA)
Rental cost for machinery, equipment, and buildings .....	193 519	106 047	50 128	(NA)	1	1	1	(NA)
For machinery and equipment .....	92 670	52 089	28 488	19 513	2	7	2	2
For buildings .....	100 848	53 958	21 640	(NA)	1	1	1	(NA)
Selected purchased services .....	166 980	105 824	75 581	(NA)	2	1	3	(NA)
Communication services .....	71 029	46 944	29 797	(NA)	3	1	1	(NA)
Repairs to buildings and other structures .....	12 869	8 110	5 066	(NA)	4	3	2	(NA)
Repairs to machinery and equipment .....	83 080	50 769	40 719	(NA)	2	2	6	(NA)
Ownership of construction projects:								
Value of construction work <sup>1</sup> .....	16 426 850	9 847 453	6 057 467	4 084 687	1	1	1	1
Government owned .....	1 820 212	1 095 617	739 240	906 801	2	3	1	1
Federal .....	867 368	(NA)	(NA)	(NA)	3	(NA)	(NA)	(NA)
State and local .....	1 152 844	(NA)	(NA)	(NA)	2	(NA)	(NA)	(NA)
Privately owned .....	14 606 637	8 751 836	5 318 227	3 177 886	1	1	1	1

<sup>1</sup>In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

<sup>2</sup>Data were collected separately for establishments classified in SIC 1531, Operative Builders, and SIC 6552, Subdividers and Developers, Except Cemeteries. For all other industries, data are included in other business receipts.

<sup>3</sup>For 1972, includes data for power, fuels, and lubricants.

**Table 3. Assets, Capital Expenditures, and Depreciation for Establishments With Payroll: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	1987	1982	Relative standard error of estimate (percent)	
			1987	1982
<b>BUILDINGS AND OTHER STRUCTURES, MACHINERY, AND EQUIPMENT</b>				
Beginning-of-year gross book value of depreciable assets -----	990 641	933 374	1	1
Capital expenditures, other than land -----	197 843	122 801	2	2
New -----	159 571	96 145	2	2
Used -----	38 272	26 656	5	4
Retirements and disposition of depreciable assets -----	53 363	45 816	5	10
End-of-year gross book value of depreciable assets -----	1 135 122	1 010 359	1	1
Depreciation charges during year -----	158 634	146 341	2	1
<b>Buildings and other Structures, Additions, and Related Facilities</b>				
Beginning-of-year gross book value of depreciable assets -----	266 517	317 313	3	2
Capital expenditures, other than land -----	30 039	21 282	5	4
New buildings and other structures -----	18 493	17 469	4	4
Used buildings and other structures -----	11 546	3 813	12	8
Retirements and disposition of depreciable assets -----	9 661	10 713	11	25
End-of-year gross book value of depreciable assets -----	286 895	327 881	3	1
Depreciation charges during year -----	25 943	21 753	4	3
<b>Machinery and Equipment</b>				
Beginning-of-year gross book value of depreciable assets -----	724 124	616 060	2	1
Capital expenditures, other than land -----	167 604	101 519	3	2
New machinery and equipment, including automobiles and trucks -----	141 078	78 678	3	2
New automobiles and trucks, intended primarily for highway use -----	93 677	44 856	3	2
Used machinery and equipment, including automobiles and trucks -----	26 728	22 842	5	4
Retirements and disposition of depreciable assets -----	43 702	35 102	6	6
End-of-year gross book value of depreciable assets -----	848 228	882 477	2	1
Depreciation charges during year -----	132 690	124 587	2	1

**Table 4. Value of Inventories for Establishments With Payroll: 1987 and 1986**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Establishments with payroll	Relative standard error of estimate (percent)
<b>All establishments:</b>		
Number .....	17 809	1
Value of construction work .....	16 426 850	1
<b>Establishments with inventories:</b>		
Number .....	5 988	3
Value of construction work .....	9 197 068	1
<b>Inventories<sup>1</sup>:</b>		
End of 1987, materials and supplies .....	243 357	2
End of 1986, materials and supplies .....	236 373	2
<b>Establishments with no inventories:</b>		
Number .....	9 368	2
Value of construction work .....	5 159 145	2
<b>Establishments not reporting:</b>		
Number .....	2 453	5
Value of construction work .....	2 070 637	3

<sup>1</sup>Inventories at cost or market prior to any adjustment to correct to LIFO values.



**Table 5. Selected Statistics for Establishments With Payroll by Employment Size Class: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	Total	Establishments with an average of—									1,000 employees or more
		1 to 4 employees	5 to 9 employees	10 to 19 employees	20 to 49 employees	50 to 99 employees	100 to 249 employees	250 to 499 employees	500 to 999 employees		
<b>1987</b>											
Number of establishments -----	17 809	(S)	3 930	2 761	2 114	677	306	44	7	1	
All employees** -----	253 563	(S)	25 998	36 553	63 632	45 964	44 068	14 794	6 070	(D)	
Payroll, all employees -----	5 484 795	(S)	421 401	711 673	1 413 584	1 107 473	1 032 293	397 484	153 957	(D)	
Construction worker hours (thousands) -----	350 749	(S)	31 379	47 235	89 516	67 572	62 690	22 901	8 100	(D)	
Dollar value of business done -----	16 750 794	(S)	1 651 677	2 290 655	4 303 387	3 013 144	2 624 354	1 198 206	389 707	(D)	
Value of construction work <sup>1</sup> -----	16 426 850	(S)	1 641 129	2 257 272	4 214 380	2 949 335	2 558 328	1 540 701	(D)	(D)	
Net value of construction work† -----	15 137 323	(S)	1 420 086	2 073 723	3 912 415	2 766 486	2 409 029	1 483 116	(D)	(D)	
Value added†† -----	9 747 631	(S)	845 199	1 280 179	2 504 466	1 775 286	1 639 852	830 651	251 695	(D)	
Cost of materials, components, supplies, and fuels -----	5 713 635	(S)	585 435	826 928	1 496 955	1 055 008	835 203	330 092	117 890	(D)	
Cost of construction work subcontracted to others -----	1 289 527	(S)	221 042	183 548	301 964	182 849	149 299	37 463	20 122	(D)	
Rental cost for machinery, equipment, and buildings -----	193 519	(S)	20 434	27 857	52 804	37 221	28 027	7 988	5 773	(D)	
Capital expenditures, other than land -----	197 843	(S)	24 559	34 572	53 035	27 623	21 949	7 175	6 456	(D)	
End-of-year gross book value of depreciable assets -----	1 135 122	(S)	144 311	175 340	304 531	184 947	146 853	42 532	17 249	(D)	
<b>1982</b>											
All employees** -----	199 790	17 019	21 829	31 005	46 665	30 949	29 576	11 990	10 757	(D)	
Total construction receipts <sup>1</sup> -----	9 847 453	702 932	913 579	1 481 867	2 363 057	1 679 571	1 526 449	675 272	504 726	(D)	
Value added†† -----	6 009 367	386 398	504 025	838 797	1 431 463	1 055 869	998 821	422 863	371 129	(D)	
<b>1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)</b>											
All employees** -----	1	(S)	3	3	1	1	1	(W)	(W)	(D)	
Net value of construction work† -----	1	(S)	4	2	1	(W)	1	(W)	(D)	(D)	
Capital expenditures, other than land -----	2	(S)	10	6	5	3	4	(W)	(W)	(D)	

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

<sup>1</sup>In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

**Table 6. Selected Statistics by Size Class of the Dollar Value of Business Done for Establishments With Payroll: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	Total	Establishments with dollar value of business done									
		Less than \$25,000	\$25,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$249,999	\$250,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 to \$2,499,999	\$2,500,000 to \$4,999,999	\$5,000,000 to \$9,999,999	\$10,000,000 or more
1987											
Number of establishments -----	17 809	(S)	(S)	(S)	3 984	3 541	2 412	2 266	910	433	171
All employees** -----	253 563	(S)	(S)	(S)	15 320	24 226	31 193	54 972	44 960	38 152	37 507
Payroll, all employees -----	5 484 795	(S)	(S)	(S)	196 078	376 657	556 438	1 145 136	1 068 888	993 175	1 092 380
Construction worker hours (thousands) -----	350 749	(S)	(S)	(S)	17 442	30 948	40 789	76 931	64 849	56 486	56 082
Dollar value of business done -----	16 750 794	(S)	(S)	(S)	662 879	1 240 537	1 700 172	3 518 677	3 175 738	2 932 626	3 295 207
Value of construction work <sup>1</sup> -----	16 426 850	(S)	(S)	(S)	658 422	1 231 226	1 678 624	3 459 995	3 105 274	2 867 915	3 202 317
Net value of construction work† -----	15 137 323	(S)	(S)	(S)	606 289	1 124 426	1 525 400	3 166 847	2 874 238	2 608 558	3 022 547
Value added†† -----	9 747 631	(S)	(S)	(S)	386 007	672 921	923 783	1 991 980	1 808 312	1 678 777	2 148 942
Cost of materials, components, supplies, and fuels -----	5 713 635	(S)	(S)	(S)	224 738	460 815	623 165	1 233 549	1 136 389	994 491	966 495
Cost of construction work subcontracted to others -----	1 289 527	(S)	(S)	(S)	52 133	106 800	153 223	293 148	231 036	259 357	179 770
Rental cost for machinery, equipment, and buildings -----	193 519	(S)	(S)	(S)	7 216	15 729	24 393	41 271	38 138	35 328	29 292
Capital expenditures, other than land -----	197 843	(S)	(S)	(S)	13 053	21 817	23 207	48 361	34 844	24 068	28 762
End-of-year gross book value of depreciable assets -----	1 135 122	(S)	(S)	(S)	69 602	113 039	150 356	256 765	188 913	178 039	148 453
1982											
All employees** -----	199 790	2 799	3 186	7 497	17 892	20 280	26 198	39 559	29 381	23 982	29 014
Total construction receipts <sup>1</sup> -----	9 847 453	25 413	57 006	192 773	579 571	804 542	1 179 023	2 060 162	1 645 489	1 439 443	1 864 029
Value added†† -----	6 009 367	14 791	33 689	111 874	323 365	447 313	684 378	1 223 078	1 034 416	912 750	1 223 710
1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)											
All employees** -----	1	(S)	(S)	(S)	4	4	3	2	1	1	(W)
Net value of construction work† -----	1	(S)	(S)	(S)	4	3	3	2	1	1	(W)
Capital expenditures, other than land -----	2	(S)	(S)	(S)	11	10	7	5	4	5	6

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

<sup>1</sup>In earlier censuses construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.



**Table 7. Value of Construction Work for Establishments With Payroll by Type of Construction: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Type of construction	Value of construction work <sup>1</sup>				Relative standard error of estimate (percent) for column—			
	Total	New construction	Additions, alterations, or reconstruction <sup>2</sup>	Maintenance and repair	A	B	C	D
	A	B	C	D	A	B	C	D
<b>1987</b>								
Value of construction work <sup>1</sup> .....	16 426 850	12 104 160	2 913 835	1 064 836	1	1	1	2
<b>Building construction</b> .....	15 522 617	11 830 335	2 809 300	882 983	1	1	1	2
Single-family houses .....	4 486 565	3 946 095	336 764	203 705	1	2	3	4
Single-family houses, detached .....	3 533 295	3 074 519	291 282	167 494	2	2	3	5
Single-family houses, attached .....	953 269	871 576	45 482	36 210	3	3	8	6
Apartment buildings with two or more apartments .....	1 222 838	1 094 049	78 861	49 927	3	3	4	6
Other residential buildings, including hotels and motels .....	898 641	743 151	121 995	33 493	2	2	6	8
Hotels and motels .....	689 525	596 905	79 377	13 242	2	3	2	3
Other residential buildings, excluding hotels and motels .....	209 116	146 246	42 618	20 251	6	5	18	14
Office buildings .....	3 783 203	2 610 072	998 683	174 448	1	1	1	3
Other commercial buildings such as stores, restaurants, and automobile service stations .....	1 904 274	1 395 920	404 259	104 093	1	1	2	4
Industrial buildings and warehouses .....	1 294 473	830 566	276 807	187 100	2	3	2	2
Industrial buildings .....	1 033 733	639 724	229 086	164 922	3	4	3	2
Warehouses .....	260 740	190 841	47 720	22 177	2	2	3	8
Religious buildings .....	240 339	174 178	51 363	14 797	2	2	5	8
Educational buildings .....	625 741	383 824	188 815	53 101	2	2	2	9
Hospitals and institutional buildings .....	894 437	549 184	295 621	49 631	1	1	1	4
Amusement, social, and recreational buildings .....	72 963	53 123	14 277	5 561	2	3	4	8
Other nonresidential buildings .....	99 143	50 173	41 843	7 127	6	7	9	30
<b>Nonbuilding construction</b> .....	560 215	273 825	104 536	181 853	2	2	6	2
Blast furnaces, petroleum refineries, and chemical complexes .....	198 054	69 930	52 616	75 507	3	3	3	4
Power plants .....	290 620	170 798	24 067	95 754	1	(W)	5	1
Power plants, nuclear .....	154 890	125 347	4 496	25 046	(W)	(W)	(W)	(W)
Power plants, except nuclear .....	135 730	45 451	19 570	70 708	1	1	6	1
Other nonbuilding construction .....	71 541	33 097	27 852	10 592	20	29	30	10
<b>Construction work, n.s.k.</b> .....	344 018	(NA)	(NA)	(NA)	6	(NA)	(NA)	(NA)
<b>1982</b>								
Value of construction work <sup>1</sup> .....	9 847 453	7 852 297	(NA)	1 995 156	1	1	(NA)	1
<b>Building construction</b> .....	8 394 425	6 755 708	(NA)	1 638 717	(W)	(W)	(NA)	1
Single-family houses .....	1 564 786	1 185 575	(NA)	379 210	2	2	(NA)	3
Single-family houses, detached .....	1 247 634	904 425	(NA)	343 208	2	2	(NA)	3
Single-family houses, attached .....	317 151	281 149	(NA)	36 002	2	3	(NA)	5
Apartment buildings with two or more apartments .....	710 820	632 295	(NA)	78 524	2	2	(NA)	6
Other residential buildings, including hotels and motels .....	348 341	310 527	(NA)	37 814	1	1	(NA)	3
Hotels and motels .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Other residential buildings, excluding hotels and motels .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Office buildings .....	2 492 379	2 112 576	(NA)	379 803	1	(W)	(NA)	1
Other commercial buildings such as stores, restaurants, and automobile service stations .....	663 013	525 306	(NA)	137 707	2	2	(NA)	2
Industrial buildings and warehouses .....	1 254 889	921 891	(NA)	332 998	1	1	(NA)	2
Industrial buildings .....	1 076 460	776 791	(NA)	299 669	1	1	(NA)	2
Warehouses .....	178 429	145 099	(NA)	33 329	3	3	(NA)	5
Religious buildings .....	137 964	104 669	(NA)	33 295	2	2	(NA)	5
Educational buildings .....	419 558	324 052	(NA)	95 505	1	1	(NA)	2
Hospitals and institutional buildings .....	680 230	549 234	(NA)	130 995	1	1	(NA)	2
Amusement, social, and recreational buildings .....	66 322	54 258	(NA)	12 064	3	3	(NA)	8
Other nonresidential buildings .....	56 118	35 320	(NA)	20 796	5	3	(NA)	9
<b>Nonbuilding construction</b> .....	261 581	172 263	(NA)	89 317	1	1	(NA)	2
Heavy industrial facilities .....	182 926	117 668	(NA)	65 257	1	1	(NA)	1
Blast furnaces, petroleum refineries, and chemical complexes .....	66 559	42 790	(NA)	23 768	1	1	(NA)	3
Power plants .....	116 366	74 877	(NA)	41 488	(W)	1	(NA)	(W)
Power plants, nuclear .....	21 322	12 941	(NA)	8 381	1	1	(NA)	(W)
Power plants, except nuclear .....	95 043	61 936	(NA)	33 107	1	1	(NA)	(W)
Sewage treatment and water treatment plants .....	28 811	26 052	(NA)	2 758	1	1	(NA)	2
Sewage treatment plants .....	19 834	18 120	(NA)	1 713	1	1	(NA)	2
Water treatment plants .....	8 977	7 932	(NA)	1 044	(W)	(W)	(NA)	3
Other nonbuilding construction .....	49 839	28 535	(NA)	21 297	6	4	(NA)	10
<b>Construction work, n.s.k.</b> .....	1 191 446	924 324	(NA)	267 121	1	2	(NA)	1

<sup>1</sup>In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

<sup>2</sup>In 1982, data for additions, alterations, or reconstruction were collected separately for SIC 1521, 1522, 1531, 1541, and 1542. For all other industries, data are included with "New construction."



**Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1987**

[Thousand dollars. Detail may not add to total due to rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Number of establish- ments	All employees**	Payroll, all employees	Value of construction work		Net value of construction work†	Value added††	Cost of construction work sub- contracted to others	Relative standard error of estimate (percent) for column—		
				For all types	For specialized type				B	D	H
All establishments -----	17 809	253 563	5 484 795	16 426 850	8 210 886	15 137 323	9 747 631	1 289 527	1	1	2
Establishments not specializing by type -----	4 815	96 701	2 133 580	6 205 727	(NA)	5 771 597	3 714 830	434 130	1	1	3
Establishments specializing 51 percent or more -----	12 994	156 862	3 351 214	10 221 122	8 210 886	9 365 725	6 032 801	855 397	1	1	4
SINGLE-FAMILY HOUSES, DETACHED											
All establishments specalizing in type -----	6 579	56 769	980 075	3 392 189	2 758 751	3 132 345	1 807 818	259 843	2	2	5
Establishments with —											
100 percent specialization -----	2 148	11 789	191 651	698 485	698 485	622 033	372 952	76 451	4	5	12
90 to 99 percent specialization -----	1 782	12 751	202 915	700 915	653 109	632 923	361 451	67 991	4	4	10
80 to 89 percent specialization -----	860	10 539	197 473	653 952	531 597	606 369	343 074	47 582	4	4	12
70 to 79 percent specialization -----	975	10 059	172 914	560 023	407 260	528 942	305 546	31 080	5	4	13
60 to 69 percent specialization -----	660	8 769	161 638	607 143	374 871	575 083	330 553	32 060	4	3	10
51 to 59 percent specialization -----	152	2 859	53 482	171 669	93 427	166 991	94 240	4 677	6	5	8
SINGLE-FAMILY HOUSES, ATTACHED											
All establishments specalizing in type -----	715	5 530	104 375	392 177	316 788	322 612	184 301	69 565	6	7	17
Establishments with —											
100 percent specialization -----	196	986	19 067	79 242	79 242	65 517	39 634	13 724	12	14	17
90 to 99 percent specialization -----	193	969	14 114	81 102	78 305	54 088	25 056	27 014	22	27	39
80 to 89 percent specialization -----	88	706	11 901	43 005	35 185	40 707	22 630	2 297	16	18	22
70 to 79 percent specialization -----	137	1 291	23 147	74 528	54 356	64 068	41 538	10 460	13	13	27
60 to 69 percent specialization -----	74	1 073	24 125	79 700	50 731	65 172	35 798	14 527	10	12	25
51 to 59 percent specialization -----	24	502	12 018	34 599	18 967	33 057	19 642	1 541	11	8	8
APARTMENT BUILDINGS WITH TWO OR MORE APARTMENTS											
All establishments specalizing in type -----	768	9 054	175 430	632 638	480 601	534 095	330 646	98 542	4	6	12
Establishments with —											
100 percent specialization -----	139	1 454	28 063	115 652	115 652	90 593	50 622	25 058	8	20	33
90 to 99 percent specialization -----	85	622	8 194	47 472	43 395	38 297	21 692	9 174	20	21	30
80 to 89 percent specialization -----	171	1 466	29 393	105 855	87 412	98 306	62 710	7 549	8	10	19
70 to 79 percent specialization -----	197	1 961	34 207	144 070	103 530	109 933	64 055	34 136	11	13	23
60 to 69 percent specialization -----	130	2 398	46 829	149 065	91 294	132 839	86 824	16 225	6	6	16
51 to 59 percent specialization -----	43	1 150	28 741	70 523	39 316	64 125	44 741	6 397	10	8	4
HOTELS AND MOTELS											
All establishments specalizing in type -----	69	3 168	85 250	249 896	175 228	218 232	151 452	31 664	4	8	28
Establishments with —											
100 percent specialization -----	12	370	12 123	27 114	27 114	22 866	17 356	4 248	8	3	(W)
90 to 99 percent specialization -----	*11	260	6 008	*21 448	*20 189	(D)	13 960	(D)	21	47	(D)
80 to 89 percent specialization -----	4	351	8 772	26 968	22 412	(D)	18 710	(D)	(W)	(W)	(D)
70 to 79 percent specialization -----	12	262	4 859	*20 581	*15 406	17 605	*10 968	*2 975	38	43	58
60 to 69 percent specialization -----	16	1 052	28 288	71 974	45 129	69 947	47 267	2 027	(W)	(W)	(W)
51 to 59 percent specialization -----	14	871	25 199	81 810	44 976	64 043	43 190	*17 766	5	17	45
OTHER RESIDENTIAL BUILDINGS, EXCLUDING HOTELS AND MOTELS											
All establishments specializing in type -----	144	1 295	26 661	81 230	71 596	64 015	41 846	17 214	10	13	30
Establishments with —											
100 percent specialization -----	89	337	4 588	26 130	26 130	18 766	10 882	7 364	27	22	31
90 to 99 percent specialization -----	20	462	10 389	29 215	27 339	23 316	14 181	*5 898	15	26	71
80 to 89 percent specialization -----	*29	*147	3 309	11 723	9 557	10 902	8 559	*821	46	30	55
70 to 79 percent specialization -----	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
60 to 69 percent specialization -----	*2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
51 to 59 percent specialization -----	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
OFFICE BUILDINGS											
All establishments specalizing in type -----	1 480	38 316	1 050 246	2 855 738	2 259 033	2 625 785	1 786 884	229 952	1	1	5
Establishments with —											
100 percent specialization -----	438	7 738	214 318	615 593	615 593	559 890	360 799	55 702	3	3	12
90 to 99 percent specialization -----	168	5 563	154 023	408 374	377 752	368 877	256 971	39 496	3	4	21
80 to 89 percent specialization -----	225	6 581	182 540	483 366	393 093	451 615	314 984	31 750	2	2	4
70 to 79 percent specialization -----	300	7 420	192 923	524 854	379 924	489 478	332 283	35 376	3	2	3
60 to 69 percent specialization -----	213	8 789	248 442	663 230	405 058	621 683	430 714	41 546	2	2	4
51 to 59 percent specialization -----	134	2 223	57 999	160 320	87 610	134 239	91 130	26 080	5	3	(W)
OTHER COMMERCIAL BUILDINGS SUCH AS STORES, RESTAURANTS, AND AUTOMOBILE SERVICE STATIONS											
All establishments specializing in type -----	914	14 709	314 264	939 413	734 997	871 599	573 187	67 813	3	2	4
Establishments with —											
100 percent specialization -----	340	3 779	80 528	240 213	240 213	224 879	143 154	15 333	7	6	13
90 to 99 percent specialization -----	69	1 872	36 622	97 409	89 845	91 531	59 979	5 877	6	7	8
80 to 89 percent specialization -----	118	1 928	37 225	109 240	89 925	104 118	67 487	5 121	10	8	23
70 to 79 percent specialization -----	147	2 387	56 722	165 890	121 650	151 428	107 770	14 462	7	4	4
60 to 69 percent specialization -----	141	3 009	65 459	214 787	132 446	195 819	129 246	18 968	8	3	3
51 to 59 percent specialization -----	97	1 730	37 705	111 872	60 916	103 821	65 550	8 050	9	5	9

**Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1987—Con.**

[Thousand dollars. Detail may not add to total due to rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Number of establishments	All employees**	Payroll, all employees	Value of construction work		Net value of construction work†	Value added††	Cost of construction work sub-contracted to others	Relative standard error of estimate (percent) for column—		
				For all types	For specialized type				B	D	H
A	B	C	D	E	F	G	H				
INDUSTRIAL BUILDINGS											
All establishments specializing in type .....	377	8 558	191 852	511 979	417 441	496 680	356 968	15 299	3	6	9
Establishments with —											
100 percent specialization .....	126	2 475	50 205	120 812	120 812	117 479	83 324	3 333	5	4	11
90 to 99 percent specialization .....	41	486	8 242	26 929	25 666	26 189	16 976	*739	20	21	41
80 to 89 percent specialization .....	30	2 643	66 636	180 897	152 066	177 556	122 639	3 341	3	15	5
70 to 79 percent specialization .....	76	1 435	27 870	68 649	49 793	66 224	52 564	2 424	9	9	16
60 to 69 percent specialization .....	92	1 141	30 979	76 575	47 730	71 947	50 571	4 628	15	11	25
51 to 59 percent specialization .....	9	376	7 918	38 114	21 371	37 283	30 892	831	13	6	2
EDUCATIONAL BUILDINGS											
All establishments specializing in type .....	132	1 538	30 590	82 384	61 109	79 145	52 744	3 238	11	10	11
Establishments with —											
100 percent specialization .....	39	151	2 538	*10 025	*10 025	(D)	*7 229	(D)	39	45	(D)
90 to 99 percent specialization .....	10	131	3 461	9 086	8 376	(D)	5 770	(D)	28	28	(D)
80 to 89 percent specialization .....	16	328	7 070	16 215	13 072	15 703	9 956	512	18	13	12
70 to 79 percent specialization .....	26	258	3 919	13 582	10 116	12 840	8 357	742	37	23	19
60 to 69 percent specialization .....	24	404	8 517	20 145	12 409	19 473	13 317	672	20	12	15
51 to 59 percent specialization .....	15	263	5 082	13 328	7 107	12 705	8 113	622	28	29	38
HOSPITALS AND INSTITUTIONAL BUILDINGS											
All establishments specializing in type .....	188	3 217	72 568	185 630	132 716	173 762	122 794	11 868	8	3	8
Establishments with —											
100 percent specialization .....	*18	228	7 104	15 743	15 743	(D)	9 935	(D)	13	6	(D)
90 to 99 percent specialization .....	36	334	7 278	14 752	13 299	(D)	11 004	(D)	9	3	(D)
80 to 89 percent specialization .....	39	588	11 595	24 581	19 881	23 301	16 464	1 279	19	12	12
70 to 79 percent specialization .....	43	552	14 822	42 631	31 155	40 467	26 789	2 164	10	7	2
60 to 69 percent specialization .....	42	1 097	21 380	58 661	36 616	54 307	38 148	4 354	21	8	21
51 to 59 percent specialization .....	7	414	10 388	29 261	16 020	27 581	20 452	1 680	(W)	(W)	(W)



**Table 9. Quarterly Construction Worker Hours and Employment for Establishments With**

[Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	Number of establishments	Average number of construction workers	Construction worker hours (thousands)	January to March		April to June	
				Construction workers <sup>1</sup>	Hours worked (thousands)	Construction workers <sup>1</sup>	Hours worked (thousands)
	A	B	C	D	E	F	G
<b>United States</b> .....	<b>17 809</b>	<b>217 392</b>	<b>350 749</b>	<b>209 597</b>	<b>81 998</b>	<b>216 084</b>	<b>87 403</b>
Alabama .....	224	2 592	4 645	2 490	1 064	2 520	1 156
Alaska .....	49	257	406	204	70	302	113
Arizona .....	548	9 037	13 987	8 516	3 289	9 474	3 719
Arkansas .....	104	658	1 028	617	236	629	259
California .....	2 991	42 757	62 739	42 195	14 701	42 454	15 853
Colorado .....	343	3 178	5 472	2 793	1 126	3 162	1 301
Connecticut .....	240	3 076	5 172	2 831	1 206	2 995	1 298
Delaware .....	61	718	1 220	704	286	699	296
District of Columbia .....	13	610	1 024	590	244	628	267
Florida .....	1 530	16 831	27 667	16 177	6 367	16 947	6 850
Georgia .....	432	5 496	9 736	5 316	2 292	5 477	2 510
Hawaii .....	55	655	1 067	624	233	705	273
Idaho .....	100	540	1 072	481	247	564	291
Illinois .....	501	8 313	12 782	8 033	3 075	8 203	3 229
Indiana .....	275	2 754	5 239	2 611	1 166	2 900	1 333
Iowa .....	146	947	1 664	820	337	915	404
Kansas .....	187	1 526	2 269	1 546	557	1 523	574
Kentucky .....	172	2 839	4 805	2 670	1 098	2 734	1 147
Louisiana .....	176	2 305	3 972	2 340	1 019	2 229	914
Maine .....	128	1 329	2 278	1 405	560	1 314	552
Maryland .....	328	7 108	11 921	6 578	2 738	6 917	2 914
Massachusetts .....	574	5 425	9 924	4 769	2 188	5 418	2 449
Michigan .....	463	4 027	6 039	3 790	1 487	3 962	1 418
Minnesota .....	329	2 510	4 329	2 390	982	2 673	1 125
Mississippi .....	84	840	1 582	733	333	792	355
Missouri .....	375	3 998	6 335	4 059	1 576	4 030	1 619
Montana .....	42	109	107	86	21	116	22
Nebraska .....	128	1 040	1 974	988	443	1 000	474
Nevada .....	84	2 391	3 519	2 437	920	2 625	940
New Hampshire .....	176	1 851	2 399	1 867	551	1 800	599
New Jersey .....	468	6 085	9 909	5 378	2 096	5 812	2 340
New Mexico .....	147	1 580	2 572	1 648	635	1 627	675
New York .....	842	14 084	24 300	13 158	5 432	14 007	6 100
North Carolina .....	409	5 151	8 926	4 713	1 972	4 995	2 172
North Dakota .....	60	301	480	233	106	298	118
Ohio .....	546	6 125	10 850	5 766	2 474	6 106	2 666
Oklahoma .....	160	1 171	1 879	1 040	379	1 031	404
Oregon .....	280	1 752	2 524	1 688	588	1 558	580
Pennsylvania .....	633	9 598	16 275	9 586	4 031	9 809	4 107
Rhode Island .....	115	1 013	1 727	893	393	1 008	392
South Carolina .....	216	1 918	3 207	1 987	823	1 889	776
South Dakota .....	37	144	235	116	42	140	59
Tennessee .....	272	4 254	7 079	4 059	1 611	4 312	1 794
Texas .....	1 026	12 192	19 117	12 301	4 922	11 731	4 643
Utah .....	203	1 395	2 479	1 379	626	1 368	624
Vermont .....	55	380	719	388	181	402	197
Virginia .....	506	7 041	11 681	7 215	2 657	7 159	2 990
Washington .....	547	4 889	6 496	4 887	1 511	4 635	1 540
West Virginia .....	35	288	471	241	94	297	122
Wisconsin .....	349	2 087	3 266	2 051	754	2 016	788
Wyoming .....	*24	201	158	190	38	154	37

<sup>1</sup>Construction workers during pay periods including 12th of March, May, August, and November.

# Payroll by State: 1987

July to September		October to December		Relative standard error of estimate (percent) for column--										Location of establishment
Construction workers <sup>1</sup>	Hours worked (thousands)	Construction workers <sup>1</sup>	Hours worked (thousands)											
H	I	J	K	B	C	D	E	F	G	H	I	J	K	
226 327	92 419	217 612	88 927	1	1	1	1	1	1	1	1	1	1	U.S.
2 540	1 134	2 832	1 290	4	5	5	6	5	5	4	5	5	7	AL
355	154	167	67	10	10	12	9	11	8	11	14	19	16	AK
9 439	3 653	8 718	3 325	3	3	3	4	3	4	3	3	4	4	AZ
673	272	715	260	11	12	11	13	9	13	13	12	13	13	AR
44 376	16 740	42 004	15 443	1	2	1	2	1	2	2	2	2	2	CA
3 263	1 479	3 496	1 564	6	8	6	6	5	7	8	10	9	12	CO
3 374	1 400	3 107	1 267	3	5	3	5	4	6	4	5	4	5	CT
750	323	719	314	7	8	8	8	8	8	7	8	7	8	DE
627	263	596	249	(W)	3	(W)	3	(W)	3	(W)	2	(W)	2	DC
17 195	7 230	17 003	7 219	3	4	3	4	3	4	3	4	3	4	FL
5 856	2 535	5 333	2 398	3	4	3	3	3	4	4	4	4	4	GA
657	281	633	279	5	6	5	4	6	10	5	6	6	8	HI
496	242	621	290	15	23	22	31	18	24	16	26	17	24	ID
8 569	3 311	8 446	3 166	2	2	2	2	2	2	2	2	2	2	IL
2 823	1 415	2 689	1 324	4	6	4	6	4	6	4	7	4	7	IN
1 045	465	1 008	456	9	11	9	12	10	13	9	13	8	10	IA
1 549	570	1 486	565	8	7	6	7	7	7	13	9	7	8	KS
2 890	1 253	3 060	1 306	8	12	7	12	8	12	8	13	8	12	KY
2 261	936	2 390	1 101	5	5	5	6	5	4	6	6	5	6	LA
1 376	631	1 220	533	14	12	18	13	14	12	13	12	14	11	ME
7 532	3 147	7 406	3 120	2	3	2	4	3	4	2	3	2	3	MD
6 026	2 700	5 487	2 586	5	8	4	7	5	8	6	9	6	10	MA
4 275	1 547	4 083	1 586	3	4	3	4	4	4	4	4	3	4	MI
2 532	1 129	2 444	1 091	4	6	5	6	5	7	4	6	5	8	MN
930	458	907	434	6	6	6	6	7	7	8	10	6	9	MS
3 999	1 643	3 905	1 495	3	4	3	4	3	4	3	4	4	4	MO
135	38	99	25	30	19	30	13	29	17	34	26	29	24	MT
1 081	526	1 089	530	8	12	7	10	9	10	8	13	8	14	NE
2 481	917	2 021	742	10	11	12	14	11	15	11	14	6	5	NV
1 928	652	1 810	595	10	8	12	9	10	9	9	8	10	9	NH
6 499	2 677	6 654	2 796	2	4	3	3	3	4	2	4	3	6	NJ
1 678	692	1 366	569	8	9	7	9	8	11	9	11	9	12	NM
15 025	6 526	14 150	6 240	1	2	2	2	1	2	1	2	2	2	NY
5 605	2 437	5 289	2 344	3	4	4	5	3	4	4	4	3	4	NC
352	136	322	118	16	19	15	17	15	19	19	21	17	21	ND
6 396	2 962	6 242	2 747	3	4	3	4	3	4	3	4	3	4	OH
1 112	463	1 502	631	8	9	8	9	8	7	11	15	7	9	OK
1 956	695	1 806	660	5	7	6	7	5	8	7	7	6	7	OR
9 621	4 183	9 379	3 952	3	3	2	3	3	4	3	4	3	4	PA
1 135	490	1 017	450	6	8	7	10	6	9	6	8	7	7	RI
1 948	816	1 849	790	7	9	9	10	7	9	7	9	7	9	SC
161	69	161	63	23	25	20	24	25	28	21	22	37	32	SD
4 577	1 953	4 070	1 719	2	3	3	4	3	4	3	3	3	4	TN
12 426	4 693	12 317	4 857	4	2	3	3	2	2	7	3	6	3	TX
1 472	648	1 359	578	9	12	9	11	9	13	10	12	10	13	UT
383	182	345	158	13	16	14	18	14	18	15	17	9	14	VT
7 078	2 955	6 714	2 878	2	3	2	3	2	3	3	4	2	3	VA
5 149	1 742	4 887	1 702	4	4	4	4	5	5	5	5	4	5	WA
326	136	291	117	11	10	9	13	10	8	13	9	15	12	WV
2 105	846	2 176	877	5	7	6	6	6	7	6	8	6	7	WI
263	46	200	36	14	19	14	20	15	20	20	16	16	21	WY



**Table 10. Value of Construction Work for Establishments With Payroll by Location of Construction Work: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of construction work	1987					1982 construction receipts for work done in this State <sup>1</sup>	Percent change 1987 (col A) to 1982 (col F)	Relative standard error of estimate (percent) for column—		
	Value of construction work done in this State <sup>1</sup>	Construction work done by establishments located in this State		Construction work done by establishments not located in this State						
		Number	Value of construction work	Number	Value of construction work					
A	B	C	D	E	F	G	A	C	E	
United States .....	18 428 850	17 887	15 055 278	3 934	1 371 572	9 847 453	66.8	1	1	3
Alabama .....	170 735	223	150 287	111	20 447	79 148	115.7	4	5	8
Alaska .....	32 291	46	25 685	16	6 606	57 205	-43.6	8	9	8
Arizona .....	492 224	543	474 852	62	17 372	195 827	151.4	3	3	11
Arkansas .....	46 667	102	35 295	58	11 371	55 273	-15.6	9	12	6
California .....	3 191 226	2 991	3 112 771	114	78 455	1 404 053	127.3	1	1	12
Colorado .....	194 165	332	186 369	31	7 795	219 891	-11.7	4	4	5
Connecticut .....	340 805	240	313 009	116	27 795	117 577	189.9	6	6	15
Delaware .....	62 479	61	39 102	58	23 376	41 712	49.8	6	8	5
District of Columbia .....	109 205	13	12 735	139	96 470	68 610	59.2	3	(W)	4
Florida .....	1 227 469	1 522	1 172 079	114	55 389	678 881	80.8	4	4	4
Georgia .....	386 052	432	339 400	122	46 652	189 703	103.5	3	4	10
Hawaii .....	61 746	55	(D)	5	(D)	65 750	-6.1	3	(D)	(D)
Idaho .....	31 281	92	27 946	15	3 335	36 237	-13.7	13	15	3
Illinois .....	631 946	501	809 407	90	22 538	392 442	61.0	2	2	4
Indiana .....	207 997	273	185 751	107	22 245	174 291	19.3	4	4	6
Iowa .....	87 149	145	58 102	80	11 047	83 733	6.4	7	8	7
Kansas .....	111 888	182	87 318	100	24 350	71 488	58.2	7	9	8
Kentucky .....	150 813	172	138 117	117	14 498	96 452	58.2	7	8	7
Louisiana .....	111 244	175	102 138	58	9 105	293 723	-82.1	8	7	4
Maine .....	79 837	128	71 898	18	7 739	33 501	137.7	7	8	1
Maryland .....	433 307	319	386 825	182	46 481	210 281	108.1	2	2	2
Massachusetts .....	552 282	574	451 251	167	101 030	242 795	127.5	3	4	10
Michigan .....	348 134	483	335 548	95	12 588	210 442	65.4	4	5	3
Minnesota .....	288 019	329	257 521	94	10 498	156 850	70.9	7	7	32
Mississippi .....	53 498	81	44 512	52	8 984	52 348	2.2	7	8	5
Missouri .....	293 738	374	265 716	46	28 022	209 685	40.1	3	3	6
Montana .....	5 822	42	5 260	6	561	21 093	-72.4	23	25	4
Nebraska .....	65 023	128	58 477	31	6 546	59 140	9.9	8	8	2
Nevada .....	121 144	84	114 676	40	6 467	69 487	74.3	3	4	7
New Hampshire .....	158 579	168	108 878	121	*49 701	39 495	301.5	18	8	53
New Jersey .....	691 775	460	570 026	111	121 748	264 396	161.6	3	3	2
New Mexico .....	91 731	147	80 836	38	10 894	82 259	11.5	5	6	3
New York .....	1 290 942	839	1 216 821	96	74 320	649 677	98.7	1	1	10
North Carolina .....	343 689	409	313 013	148	30 655	180 221	90.7	3	3	6
North Dakota .....	16 785	59	12 379	10	4 406	28 258	-40.6	18	23	26
Ohio .....	471 150	546	415 108	88	56 042	260 731	80.7	2	3	2
Oklahoma .....	69 101	157	53 875	39	15 225	199 218	-65.3	5	6	7
Oregon .....	108 851	280	98 211	37	10 640	99 533	9.4	4	5	3
Pennsylvania .....	811 778	631	779 361	181	32 417	343 311	136.5	2	2	5
Rhode Island .....	68 028	115	62 578	41	5 449	29 247	132.6	7	7	9
South Carolina .....	155 803	216	125 584	107	30 218	103 449	50.6	6	8	5
South Dakota .....	10 223	32	(D)	*10	(D)	6 914	47.9	19	(D)	(D)
Tennessee .....	283 683	264	252 813	93	30 870	159 166	78.2	5	5	9
Texas .....	793 233	1 012	777 649	52	15 583	1 123 510	-29.4	2	2	8
Utah .....	87 224	203	85 674	*15	1 549	68 855	26.7	10	10	7
Vermont .....	23 776	55	22 155	36	1 621	12 513	90.0	13	14	18
Virginia .....	571 008	499	445 979	228	125 028	217 494	162.5	4	4	9
Washington .....	328 748	543	321 980	72	6 767	227 256	44.7	3	3	10
West Virginia .....	19 469	35	15 981	34	3 487	34 121	-42.9	12	14	14
Wisconsin .....	168 557	349	160 957	106	7 599	111 790	50.8	6	6	10
Wyoming .....	15 148	24	7 055	26	8 093	38 398	-60.6	5	10	5

<sup>1</sup>In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

**Table 11. Dollar Value of Business Done for Establishments With Payroll by Kind of Business Activity: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. Based on their primary business activity or combination of activities, establishments were classified into this specific industry. These establishments, however, may also be engaged in other kinds of business activities. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Primary and other kinds of business activities	Dollar value of business done <sup>1</sup>		Relative standard error of estimate (percent)	
	1987	1982	1987	1982
<b>All kinds of business .....</b>	<b>16 750 794</b>	<b>10 205 731</b>	<b>1</b>	<b>1</b>
General building contractor .....	43 352	15 857	4	6
Residential remodeling contractor .....	7 901	13 952	25	19
Painting construction .....	143 119	123 877	3	2
Masonry contractor .....	74 728	30 137	11	71
Acoustical contractor .....	1 822 722	1 189 930	1	1
Drywall contractor .....	7 713 462	3 558 205	1	1
Insulation contractor .....	3 369 329	2 704 843	1	1
Lathing contractor .....	696 101	345 477	2	2
Plastering contractor .....	1 778 398	829 843	2	2
Tile setting contractor .....	69 851	14 895	2	6
Carpentry contractor .....	126 738	118 802	3	2
Floor covering contractor, except wood .....	59 577	106 027	4	2
Flooring contractor, wood .....	4 696	17 164	(W)	5
Roofing contractor .....	21 536	43 579	8	4
Sheet metal contractor .....	8 787	57 976	(W)	2
Siding contractor .....	16 803	9 392	35	15
Concrete construction .....	11 208	10 872	15	13
Waterproofing, dampproofing and fireproofing contractor .....	22 897	50 321	5	1
Other construction activities .....	254 274	(S)	4	(S)
Retail trade .....	105 183	68 437	2	2
Wholesale trade .....	114 246	129 254	2	1
Other activities .....	92 943	(S)	2	(S)
Kind of business activity, n.s.k. ....	192 943	(S)	7	(S)

<sup>1</sup>In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.



**Table 12. Selected Industry Ratios for Establishments With Payroll: 1987 and 1982**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	1987	1982	Relative standard error of estimate (percent) for 1987
<b>AVERAGE PER ESTABLISHMENT</b>			
Number of employees**	14.2	12.2	1
Number of construction workers	12.2	10.5	1
Number of all other employees	2.0	(NA)	1
Payroll, all employees \$1,000	308.0	218.1	1
Payroll, construction workers do	244.1	178.9	1
Payroll, other employees do	63.8	39.2	1
Dollar value of business done do	940.6	623.0	1
Value of construction work <sup>1</sup> do	922.4	601.1	1
Cost of materials, components, supplies, and fuels do	320.8	217.6	1
Construction work subcontracted to others do	72.4	38.6	3
Rental cost for machinery, equipment, and buildings do	10.9	6.5	2
Capital expenditures, other than land do	11.1	7.5	2
Gross book value of depreciable assets do	63.7	61.7	2
<b>AVERAGE PER EMPLOYEE</b>			
Payroll, all employees do	21.6	17.9	(W)
Dollar value of business done do	66.1	51.1	1
Value added†† do	38.4	30.1	1
<b>AVERAGE PER CONSTRUCTION WORKER</b>			
Payroll, construction workers do	20.0	17.1	(W)
Value of construction work <sup>1</sup> do	75.6	57.4	1
Construction worker hours	1 613.4	1 496.3	1
<b>AVERAGE PER OTHER EMPLOYEE</b>			
Payroll, other employees \$1,000	31.4	(NA)	1
<b>AVERAGE PER DOLLAR VALUE OF CONSTRUCTION WORK<sup>1</sup></b>			
Payroll, all employees	.334	.363	(W)
Cost of materials, components, supplies, and fuels	.348	.362	(W)
Cost of construction work subcontracted to others	.079	.064	2
Rental cost for machinery, equipment, and buildings	.012	.011	1

<sup>1</sup>In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

**Table 13. Selected Industry Ratios for Establishments With Payroll by State: 1987**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	Average number of employees** per establishment	Payroll per employee (\$1,000)	Construction worker hours per construction worker	Value of construction work per construction worker (\$1,000)	Average per dollar of value of construction work			
					Payroll, all employees	Cost of materials, components, supplies, and fuels	Cost of construction work sub-contracted to others	Rental cost for machinery, equipment, and buildings
<b>United States</b> .....	<b>14.2</b>	<b>21.6</b>	<b>1 613.4</b>	<b>75.6</b>	<b>.334</b>	<b>.348</b>	<b>.079</b>	<b>.012</b>
Alabama .....	13.6	19.7	1 792.1	73.2	.317	.372	.070	.009
Alaska .....	6.4	35.0	1 579.8	105.9	.405	.219	.037	.029
Arizona .....	18.9	17.3	1 547.7	55.0	.361	.367	.050	.014
Arkansas .....	7.5	16.5	1 562.3	60.7	.324	.405	.086	.014
California .....	16.3	22.0	1 467.3	73.1	.343	.325	.057	.014
Colorado .....	10.8	18.4	1 721.8	60.2	.357	.337	.095	.014
Connecticut .....	15.3	29.1	1 681.4	107.8	.321	.314	.135	.011
Delaware .....	14.1	19.7	1 699.2	65.6	.360	(D)	.050	.016
District of Columbia .....	53.5	12.4	1 678.7	34.2	.414	.359	(D)	.010
Florida .....	13.0	17.8	1 643.8	71.0	.297	.374	.128	.013
Georgia .....	14.7	20.1	1 771.5	67.7	.342	.389	.087	.010
Hawaii .....	14.5	28.7	1 629.0	92.5	.377	.280	.022	.015
Idaho .....	6.8	13.6	1 985.2	75.7	.225	.432	*.157	*.020
Illinois .....	19.4	26.3	1 537.6	78.0	.394	.315	.060	.011
Indiana .....	11.9	23.5	1 902.3	76.8	.363	.379	.090	.009
Iowa .....	7.9	20.2	1 757.1	72.0	.340	.398	.073	.008
Kansas .....	9.4	20.7	1 486.9	71.9	.331	.344	.094	.007
Kentucky .....	18.8	17.6	1 692.5	59.3	.338	.365	.078	.009
Louisiana .....	15.3	20.9	1 723.2	59.1	.413	(D)	.067	.013
Maine .....	11.9	17.9	1 714.1	79.8	.257	(D)	.030	.007
Maryland .....	24.8	21.6	1 677.1	75.2	.329	.357	.053	.009
Massachusetts .....	11.3	26.7	1 829.3	88.9	.358	.327	.087	.012
Michigan .....	10.2	22.0	1 499.6	83.8	.310	.362	.110	.010
Minnesota .....	9.3	24.5	1 724.7	107.0	.280	.322	.137	.010
Mississippi .....	12.0	17.1	1 883.3	62.5	.328	.408	.040	.007
Missouri .....	12.4	23.8	1 584.5	75.1	.369	.353	.065	.009
Montana .....	3.1	10.6	981.7	49.1	.260	(D)	*.044	*.004
Nebraska .....	9.6	17.1	1 898.1	69.8	.291	(D)	(D)	.011
Nevada .....	31.6	19.3	1 471.8	50.2	.426	.331	.030	.013
New Hampshire .....	12.4	21.9	1 296.1	90.6	.285	.321	.174	.008
New Jersey .....	15.6	27.8	1 628.4	102.6	.324	.327	.095	.009
New Mexico .....	12.3	15.2	1 627.8	52.9	.329	.359	.048	.013
New York .....	19.4	28.8	1 725.4	90.6	.369	.291	.086	.011
North Carolina .....	14.9	17.7	1 732.9	65.9	.318	.437	.072	.017
North Dakota .....	6.0	15.2	1 594.7	53.9	.338	.349	.038	.013
Ohio .....	13.3	22.0	1 771.4	74.0	.354	.354	.075	.014
Oklahoma .....	8.7	19.0	1 604.6	63.5	.358	(D)	.103	.015
Oregon .....	7.3	16.9	1 440.6	58.8	.334	(D)	.046	.014
Pennsylvania .....	17.6	25.0	1 695.7	101.1	.287	.353	.036	.009
Rhode Island .....	10.4	32.1	1 704.8	89.3	.424	(D)	.039	.010
South Carolina .....	10.8	13.8	1 672.1	69.1	.242	.418	.046	.013
South Dakota .....	4.6	14.7	1 631.9	82.5	.213	.356	*.086	.011
Tennessee .....	18.2	17.7	1 664.1	69.0	.299	.399	.083	.010
Texas .....	14.1	18.5	1 568.0	71.0	.309	.390	.125	.012
Utah .....	8.2	17.8	1 777.1	67.0	.316	.378	.083	.015
Vermont .....	8.3	16.7	1 892.1	64.2	.314	.384	*.072	.010
Virginia .....	16.2	19.4	1 659.0	72.9	.310	.365	.080	.012
Washington .....	10.6	20.8	1 328.7	69.0	.356	.365	.060	.014
West Virginia .....	9.5	23.5	1 635.4	67.4	.401	(D)	.057	.005
Wisconsin .....	7.3	21.5	1 564.9	80.0	.330	.372	.075	.008
Wyoming .....	*9.7	14.9	786.1	40.1	.430	(D)	.048	.016





# APPENDIX A.

## Explanation of Terms

**Construction**—Is composed of three broad categories:

1. **New construction**—Includes the complete, original erection of structures and essential service facilities and the initial installation of integral equipment such as elevators, and plumbing, heating, and air-conditioning supplies and equipment.
2. **Additions, alterations or reconstruction**—Includes construction activity making structural changes to existing facilities. Generally, this type of activity is considered a capital investment in the property.
3. **Maintenance and repair**—Includes construction done for the purpose of upkeep of property rather than additional investment in the property.

Examples of the general distinction between maintenance and repair and reconstruction are provided here: roof repairs, including the replacement of shingles, gutters, etc., are classified under maintenance and repairs. A complete reroofing, however, is classified as reconstruction.

**Number of establishments in business during year**—Includes all establishments that were in business at any time during the year. It covers all full-year and part-year operations. Construction establishments which were inactive or idle for the entire year were not included.

**Proprietors and working partners**—These data were not collected on the census report forms. The data shown are based on crediting each sole proprietorship establishment with one active proprietor and each partnership establishment with two working partners.

**All employees**—Comprise all full-time and part-time employees on the payrolls of construction establishments, who worked or received pay for any part of the pay period including the 12th of March, May, August, and November. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included, but proprietors and partners of unincorporated firms are not.

All employees is the sum of all employees during the pay periods including the 12th of March, May, August, and November, divided by 4.

**Construction workers**—Includes all workers up through the working foreman level directly engaged in construction operations, such as painters, carpenters, plumbers, and electricians. Included are journeymen, mechanics, apprentices, laborers, truck drivers and helpers, equipment

operators, and on-site record keepers and security guards. Supervisory employees above the working foreman level are excluded from this category but are included in the "other employees" category.

**Other employees**—Includes employees in executive, purchasing, accounting, personnel, professional, technical activities, and routine office functions. Also included are supervisory employees above the working foreman level.

**Construction worker hours**—Includes the total number of hours worked by construction workers. Construction worker hours were collected for each of the four quarters of 1987.

**Payroll**—Includes the gross earnings paid in the calendar year 1987 to all employees on the payroll of construction establishments. It includes all forms of compensation such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of these establishments, if a corporation, but excludes payments to the proprietor or partners, if an unincorporated concern.

**Employer costs for fringe benefits (supplemental labor costs)**—Represents expenditures made by the employer during 1987 for legally required and voluntary fringe benefit programs for employees.

**Legally required contributions**—Include Social Security contributions, unemployment compensation, workman's compensation, and State temporary disability payments.

**Voluntary payments**—Include life insurance premiums, pension plans, insurance premiums on hospital and medical plans, welfare plans, and union negotiated benefits.

Dollar value of business done comprises the following detail:

**Value of construction work done**—Includes all value of construction work done during 1987 for construction work performed by general contractors, special trades contractors, subcontractors, and land development and improvement work. Included is new construction, additions and alterations or reconstruction, and maintenance and repair construction work. Also included is the value of any construction work done by the reporting establishments for themselves.



Builders were instructed to include the value of buildings and other structures built or being built for sale in 1987 but not sold. They were to include the costs of such construction plus normal profit. Also included is the cost of construction work done on buildings for rent or lease.

Establishments engaged in the sale and installation of such construction components as plumbing, heating, and central air conditioning supplies and equipment; lumber and building materials; paint, glass, and wallpaper; and electrical and wiring supplies, elevators or escalators, etc., were instructed to include both the value for the installation and the receipts covering the price of the items installed.

Excluded was the cost of industrial and other specialized machinery and equipment which are not an integral part of a structure.

**Land receipts**—Includes receipts from the sale of land, whether held for sale or sold in connection with the sale of houses and other structures. It excludes the value of any improvements made to the land prior to the sale. (That value was to be included in the value of construction work done.)

**Other business receipts**—Includes business receipts not reported as value of construction work done or land receipts. The item includes business receipts from retail and wholesale trade, rental of equipment, manufacturing, transportation, legal service, insurance, finance, rental of property and other real estate operations, and other nonconstruction activities. Receipts for separately definable architectural and engineering work for others are also included here.

Excluded was the value of construction work done and receipts from other business operations in foreign countries and non-operating income such as interest and dividends.

**Net value of construction work**—Derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

**Value added**—Derived for each establishment, value added is equal to dollar value of business done, less costs for construction work subcontracted to others, and costs for materials, components, supplies and fuels. For SIC 6552 and SIC 1531, for which land receipts are significant, land receipts are also subtracted from dollar value of business done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

**Selected costs**—Represents the costs for materials, components, and supplies; costs for construction work subcontracted to others; and costs for selected power, fuels, and lubricants. Capital expenditures and rental costs for machinery, equipment, and structures are shown elsewhere.

Costs for materials, components, and supplies include:

- total costs to reporting establishments during 1987 for the purchase of all materials, components, and supplies, except fuels. (Supplies include expendable tools which are charged to current accounts.)
- freight and other direct charges should represent only amount paid after discounts, and the value of materials, components, and supplies obtained from other establishments of the respondent's company.
- costs for materials, components, and supplies used by the reporting establishments in the construction or reconstruction of buildings/structures for themselves which are chargeable to their fixed assets accounts, are included in this item as are costs for materials bought and resold to others.
- costs made for direct purchases of materials, components, and supplies even though the purchases were subsequently provided to subcontractors for their use.

Excluded from this item are:

- industrial and other specialized machinery and equipment, such as printing presses; computer systems; etc., which are not an integral part of a structure
- materials furnished to contractors by the owners of projects.

Costs for construction work subcontracted to others include:

- all costs during 1987 for construction work subcontracted out to other construction contractors.

Excluded from this item are:

- The costs to the reporting establishment for its purchases of materials, components, and supplies, provided to a subcontractor for his use. Such costs are reported under a separate category, "costs for materials, components, and supplies."
- costs for the rental of machinery or equipment.

Costs for selected power, fuels, and lubricants include:

- costs for fuels, lubricants, and electric energy purchased during the year from other companies, or received from other establishments of the company.
- costs for natural and manufactured gas, fuel oil, coal and coke products, etc.

**Rental costs for machinery, equipment, and buildings**—Includes all costs during 1987 for renting or leasing construction machinery and equipment, transportation equipment, production equipment, office equipment, furniture and fixtures, scaffolding, office space, and buildings. It



excludes costs for the rental of land. It also excludes costs under agreements which, in effect, are conditional sales contracts such as capital leases. Such costs are included in "capital expenditures."

**Selected purchased services**—Includes all costs during 1987 for communication services purchased from other companies or from other establishments of the company. It also includes the cost of all repairs made to structures and equipment by outside companies, or from other establishments of the same company. It includes only the cost of that repair necessary to maintain property and equipment. It excludes the cost of improvements that increase the value of property, or the cost of adapting it for another use. Such costs are included in "capital expenditures".

**Assets and depreciation**—Refers to the original cost of all fixed tangible assets such as buildings and other structures (offices, shops, etc.); stationary machinery (generators, shop equipment, etc.); mobile machinery (tractors, trucks, etc.); and other equipment (office furniture and fixtures, etc.). Not included are such items as current assets, depletable assets, intangible assets, and nondepreciable assets.

Data on assets and depreciation were collected separately for: (1) buildings and other structures, additions, and related facilities; and, (2) machinery and equipment.

Respondents were also asked to report capitalized expenditures, depreciation charges, and the gross value of assets sold, retired, scrapped, destroyed, etc., during 1987.

**Capital expenditures**—Refers to all costs actually incurred during 1987 which were or would be chargeable to the fixed assets accounts of the reporting establishments and which were of the type for which depreciation accounts are ordinarily maintained. These expenditures cover the acquisition, the construction, and the major alteration of the reporting establishment's own buildings and other structures, whether purchased, constructed under contract, or constructed by the reporting establishment's own forces; and the acquisition of machinery and equipment.

If leasing arrangements met the criteria set down by the Financial Accounting Standards Board (FASB) for a capital lease, respondents were instructed to report the original cost or market value of that equipment or building as a fixed asset and capital expenditure if acquired during 1987.

If capital expenditures were not recorded directly at the establishment level but handled centrally at the company or division level, respondents were requested to report appropriate estimates for the individual establishments.

**Inventories**—Includes all of the materials and supplies that are owned regardless of where they are held. Excludes materials which are owned by others, but held by the reporting establishment.

Builders who built on their own account for sale were requested to report work in progress and finished units not sold for buildings and other structures built for sale.

Inventories of multi-establishment companies were instructed to be reported by the establishment that is responsible for the inventories even if these inventories were held at a separate location.

**Ownership of construction projects**—This item shows the distribution of the value of construction work done by ownership of the project, that is, Government owned or privately owned. This classification relates to the ownership of the projects or work undertaken during the construction phase. Government owned projects are shown separately for Federal, and State and local governments.

**Value of construction work subcontracted in from others**—Includes the value of construction work during 1987 for work done by reporting establishments for other construction contractors or builders. Establishments were asked to report the approximate percent of total value of construction work accounted for by such work, and the percentages reported were applied to the reported value of construction work to develop a value for this item.

**Types of construction**—This item provides data by the types of buildings, structures, or other facilities being constructed or worked on by construction establishments in 1987. Respondents were instructed that each building, structure, or other facility should be classified in terms of its function. For example, a restaurant building was to be classified in the restaurant category whether it was designed as a commercial restaurant building or an auxiliary unit of an educational institution. If respondents worked on more than one type of building or structure in a multibuilding complex, they were instructed to report separately for each building or type of structure. If they worked on a building that had more than one purpose, i.e., office and residential, or commercial, they were to classify the building by major purpose.

In addition all respondents were requested to report the percentage of the value of construction work done for new construction, additions, alterations, or reconstruction, and maintenance and repair work for each of these types. See the definition of "Construction" for the meanings of these terms.

#### Building construction:

- **Single-family houses, detached**—Includes all residential buildings constructed for one family use.
- **Single-family houses, attached (include townhouses)**—Includes all residential buildings with two or more living quarters side by side, completely independent of one another, and separated by an unbroken wall from ground to roof.
- **Apartment buildings with two or more apartments**—Includes high-rise, low-rise, or any structures containing two or more housing units (excluding attached single-family houses and townhouses described above).
- **Hotels and motels**—Includes hotels, motels, and tourist cabins intended for transient accommodations.



- **Other residential buildings**—Includes dormitories, fraternity and sorority houses, nurses homes, and other nonhousekeeping residential structures.
- **Office buildings**—Includes all buildings which are used primarily for office space or for government administrative offices. Also included are banks or financial buildings which are three stories or more.
- **Other commercial buildings, such as stores, restaurants, and automobile service stations**—Includes all buildings which are intended for use primarily in the wholesale, retail, and service trades. For example, shopping centers, department stores, drug stores, restaurants, public garages, auto service stations, and one or two story bank or financial institutions.
- **Industrial buildings**—Includes all industrial buildings and plants which are used to house production and assembly activities. Heavy industrial facilities such as blast furnaces, petroleum refineries, chemical complexes, etc., are not included in this category, but under nonbuilding construction.
- **Warehouses**—Includes commercial warehouses, cold storage plants, grain elevators, mini-warehouses, and other such storage buildings.
- **Religious buildings**—Includes all buildings which are intended for religious services or functions, such as churches, synagogues, convents, monasteries, and seminaries.
- **Educational buildings**—Includes all buildings which are used directly in administrative and instructional activities, such as colleges, universities, elementary and secondary schools, correspondence, commercial, and trade schools. Libraries, museums, and art galleries, as well as laboratories which are not a part of a manufacturing establishment, are also included.
- **Hospitals and institutional buildings**—Includes all buildings which are intended to provide hospital and institutional care, such as clinics, infirmaries, sanitariums, nursing homes, homes for the aged, and orphanages.
- **Farm buildings, nonresidential**—Includes nonresidential farm buildings such as barns, poultry houses, implement sheds, and farm silos.
- **Amusement, social, and recreational buildings**—Includes buildings which are used primarily for entertainment, social and recreational activities, such as sports arenas, theaters, music halls, golf and country club buildings, skating rinks, bowling alleys, and indoor swimming pools.
- **Other nonresidential buildings**—Includes nonresidential buildings which are not classified elsewhere, such as fire stations, prisons, civic centers, bus and air passenger terminals and hangars.

#### Nonbuilding construction:

- **Highways, streets and related work, such as installation of guardrails, highway signs, etc.**—Includes streets, roads, alleys, sidewalks, curbs and gutters, culverts, right-of-way drainage, erosion control and lighting. Also includes earthwork protective structures when used in connection with road improvements.
- **Outdoor swimming pools**—Includes wading pools and reflecting pools.
- **Recreational facilities**—Includes athletic fields, golf courses, outdoor tennis courts, trails, and camps.
- **Bridges and elevated highways**—Includes viaducts and overpasses; roads, highways, railroads, and causeways built on structural supports.
- **Tunnels**—Includes highway, pedestrian, and railroad tunnels.
- **Railroad construction**—Includes the construction of railroad beds, tracks, freight yards, and signal towers.
- **Subway construction**—Includes urban mass transit subway systems above or below ground.
- **Dam and reservoir construction**—Includes hydroelectric, water supply, and flood control dams and reservoirs.
- **Marine construction**—Includes dredging, underwater rock removal, breakwaters, navigational channels, jetties, and locks.
- **Harbor and port facilities**—Includes docks, piers, and wharves.
- **Conservation and development construction**—Includes land reclamation, irrigation projects, drainage canals, levees, and flood control projects.
- **Power and communication transmission lines, towers, and related facilities**—Includes electric power lines, telephone and telegraph lines, fiber optic cables, cable television lines, television and radio towers, electric light and power facilities.
- **Power plants, except nuclear**—Includes electric and steam generating plants.
- **Power plants, nuclear**—Includes atomic energy plants, and nuclear reactors.
- **Sewers, sewerlines, and related facilities**—Includes sanitary and storm sewers, and related facilities.
- **Sewage treatment plants**—Includes sewage treatment and waste disposal plants.
- **Water mains and related facilities**—Includes water supply systems and related facilities.

- **Water treatment plants**—Includes water filtration and water softening plants.
- **Pipeline construction other than sewer or waterlines**—Includes pipelines for the transmission of gas, petroleum products, and liquefied gases.
- **Blast furnaces, petroleum refineries, chemical complexes, etc.**—Includes coke ovens, and mining appurtenances such as tipples and washeries.
- **Other nonbuilding construction**—Includes all types of nonbuilding construction, not included elsewhere.





## APPENDIX B.

### Standard Industrial Classification Titles for Industry Groups and Industries

SIC code	Industry titles	SIC code	Industry titles
<b>15</b>	<b>BUILDING CONSTRUCTION—GENERAL CONTRACTORS AND OPERATIVE BUILDERS</b>	<b>17</b>	<b>CONSTRUCTION—SPECIAL TRADE CONTRACTORS—Con.</b>
<b>152</b>	<b>General Building Contractors—Residential Buildings</b>	<b>173</b>	<b>Electrical Work Special Trade Contractors</b>
1521	General Contractors—Single-Family Houses	1731	Electrical Work Special Trade Contractors
1522	General Contractors—Residential Buildings, Other Than Single-Family	<b>174</b>	<b>Masonry, Stone Work Tile Setting, and Plastering Special Trade Contractors</b>
<b>153</b>	<b>Operative Builders</b>	1741	Masonry, Stone Setting, and Other Stone Work Special Trade Contractors
1531	Operative Builders	1742	Plastering, Drywall, Acoustical, and Insulation Work Special Trade Contractors
<b>154</b>	<b>General Building Contractors—Nonresidential Buildings</b>	1743	Terrazzo, Tile, Marble, and Mosaic Work Special Trade Contractors
1541	General Contractors—Industrial Buildings and Warehouses	<b>175</b>	<b>Carpentry and Floor Work Special Trade Contractors</b>
1542	General Contractors—Nonresidential Buildings, Other Than Industrial Buildings and Warehouses	1751	Carpentry Work Special Trade Contractors
<b>16</b>	<b>HEAVY CONSTRUCTION OTHER THAN BUILDING CONSTRUCTION—CONTRACTORS</b>	1752	Floor Laying and Other Floor Work Special Trade Contractors, Not Elsewhere Classified
<b>161</b>	<b>Highway and Street Construction, Except Elevated Highways</b>	<b>176</b>	<b>Roofing, Siding, and Sheet Metal Work Special Trade Contractors</b>
1611	Highway and Street Construction Contractors, Except Elevated Highways	1761	Roofing, Siding, and Sheet Metal Work Special Trade Contractors
<b>162</b>	<b>Heavy Construction, Except Highway and Street Construction</b>	<b>177</b>	<b>Concrete Work Special Trade Contractors</b>
1622	Bridge, Tunnel, and Elevated Highway Construction Contractors	1771	Concrete Work Special Trade Contractors
1623	Water, Sewer, Pipeline, and Communications and Powerline Construction	<b>178</b>	<b>Water Well Drilling Special Trade Contractors</b>
1629	Heavy Construction, Not Elsewhere Classified	1781	Water Well Drilling Special Trade Contractors
<b>17</b>	<b>CONSTRUCTION—SPECIAL TRADE CONTRACTORS</b>	<b>179</b>	<b>Miscellaneous Special Trade Contractors</b>
<b>171</b>	<b>Plumbing, Heating, and Air-Conditioning Special Trade Contractors</b>	1791	Structural Steel Erection Special Trade Contractors
1711	Plumbing, Heating, and Air-Conditioning Special Trade Contractors	1793	Glass and Glazing Work Special Trade Contractors
<b>172</b>	<b>Painting and Paper Hanging Special Trade Contractors</b>	1794	Excavation Work Special Trade Contractors
1721	Painting and Paper Hanging Special Trade Contractors	1795	Wrecking and Demolition Work Special Trade Contractors
		1796	Installation or Erection of Building Equipment, Special Trade Contractors, Not Elsewhere Classified
		1799	Special Trade Contractors, Not Elsewhere Classified
		<b>6552</b>	<b>LAND SUBDIVIDERS AND DEVELOPERS, EXCEPT CEMETERIES</b>





# **APPENDIX C.**

## **Geographic Divisions and States**

### **NEW ENGLAND STATES**

Connecticut  
Maine  
Massachusetts  
New Hampshire  
Rhode Island  
Vermont

### **MIDDLE ATLANTIC STATES**

New Jersey  
New York  
Pennsylvania

### **EAST NORTH CENTRAL STATES**

Illinois  
Indiana  
Michigan  
Ohio  
Wisconsin

### **WEST NORTH CENTRAL STATES**

Iowa  
Kansas  
Minnesota  
Missouri  
Nebraska  
North Dakota  
South Dakota

### **SOUTH ATLANTIC STATES**

Delaware  
District of Columbia  
Florida  
Georgia  
Maryland

### **SOUTH ATLANTIC STATES—Con.**

North Carolina  
South Carolina  
Virginia  
West Virginia

### **EAST SOUTH CENTRAL STATES**

Alabama  
Kentucky  
Mississippi  
Tennessee

### **WEST SOUTH CENTRAL STATES**

Arkansas  
Louisiana  
Oklahoma  
Texas

### **MOUNTAIN STATES**

Arizona  
Colorado  
Idaho  
Montana  
Nevada  
New Mexico  
Utah  
Wyoming

### **PACIFIC STATES**

Alaska  
California  
Hawaii  
Oregon  
Washington



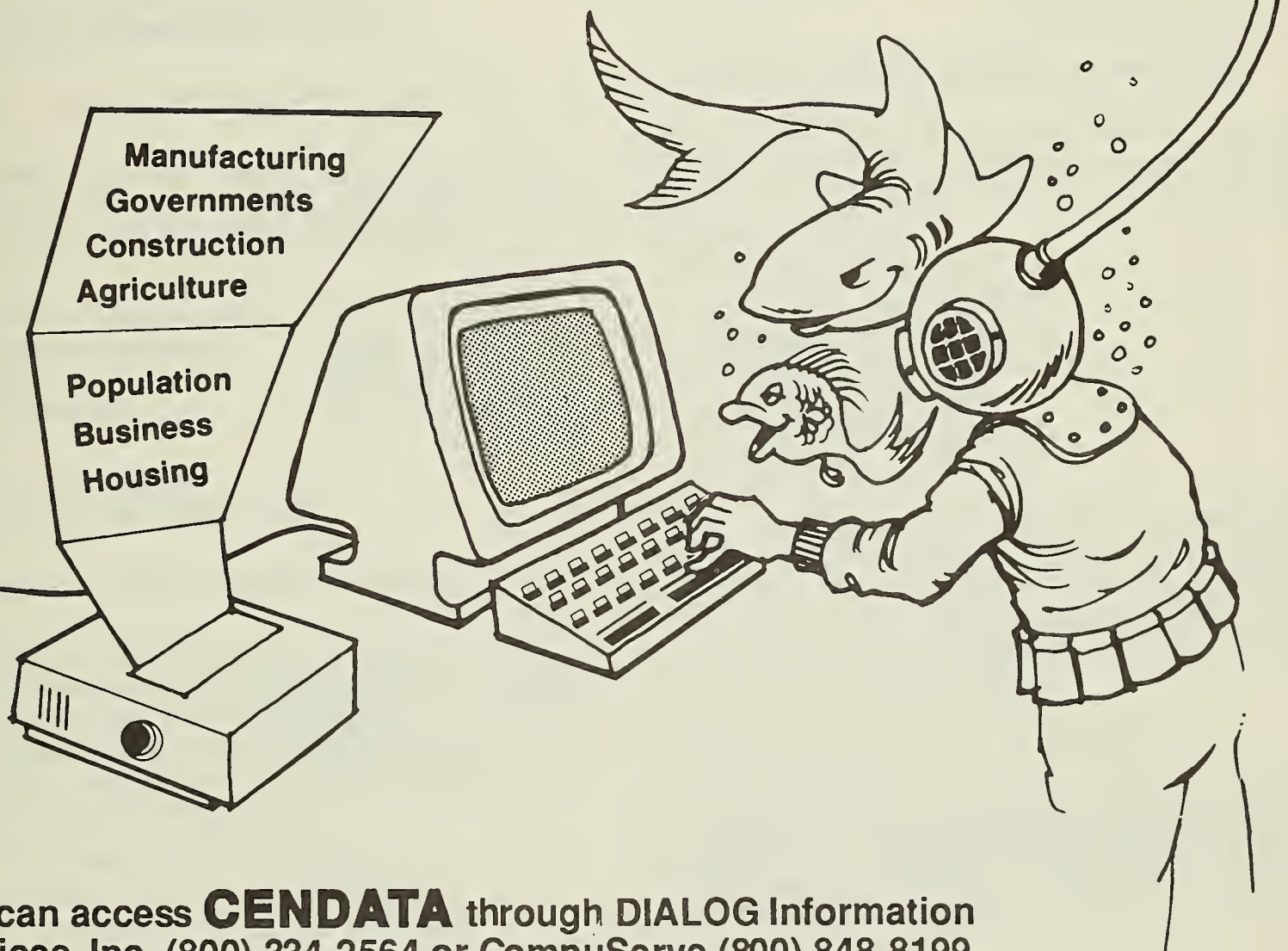


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# PUBLICATION PROGRAM

## 1987 CENSUS OF CONSTRUCTION INDUSTRIES

The Census of Construction Industries is taken once every 5 years. The census covers all establishments engaged in construction, including:

- Building contractors
- Heavy construction contractors
- Special trade contractors (including plumbers, carpenters, painters, electricians)
- Land developers and subdividers

Data products in the Census of Construction Industries are issued in 4 publication series and in 3 other media:

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- CD-ROM [C]
- Computer tape [T]
- Highlights online [+]

### Preliminary Industry Series (CC87-I-1(P) through CC87-I-28(P))

(Available November 1988 through May 1989) [P]

Twenty-seven separate industry reports and a United States summary report, providing national statistics for establishments with payroll. Statistics shown for 1987 include:

- Number of establishments
- Number of employees
- Payroll
- Hours worked
- Value of construction work done, by type of structure
- Selected operating costs

### Final Industry Series (CC87-I-1 through CC87-I-28)

(Available June 1989 through November 1989) [P] [C] [T] [+]

Twenty-seven separate industry reports and a United States summary report, providing statistics for the Nation and individual States on establishments with payroll. These reports update figures from the preliminary industry series (employment, payroll, value of construction, etc.) and provide measures of the following:

- Capital expenditures
- Inventories
- Industry profiles
- Assets
- Depreciation
- And much more

## Geographic Area Series (CC87-A-1 through CC87-A-10)

(Available January 1990 through March 1990) [P] [C] [T] [+]

Nine reports on the construction industries, representing each census geographic division, and a United States summary report. Regional reports provide detailed data for States and metropolitan statistical areas.

## Subject Report—Legal Form of Organization and Type of Operation (CC87-S-1)

(Available May 1990) [P]

One report providing selected national statistics for each industry by legal form of organization and type of operation. This report includes data for establishments with and without payroll. Data in this report include—

- Employment
- Payroll
- Value of construction work done
- Selected operating costs

## OTHER ECONOMIC CENSUSES REPORTS

The Census of Construction Industries is part of the 1987 Economic Censuses. These are conducted at five-year intervals in years ending in 2 and 7 and consist of seven separate censuses:

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Transportation
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction

...plus several related programs: enterprise statistics; information on minority-owned and women-owned businesses; and the Census of Outlying Areas, including separate economic censuses of Puerto Rico and other outlying areas. The Census of Agriculture and Census of Governments are conducted separately.

## HOW TO ORDER DATA PRODUCTS

Order forms for the specific reports and other data products may be obtained from Data User Services Division, Customer Services (Publications), Bureau of the Census, Washington, DC 20233. If you have any questions, call Census Customer Services 1-(301)-763-4100.



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Plastering, Drywall, Acoustical, and Insulation Work Special Trade Contractors

1987 Census of C

Manufacturing

**For Reference**

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